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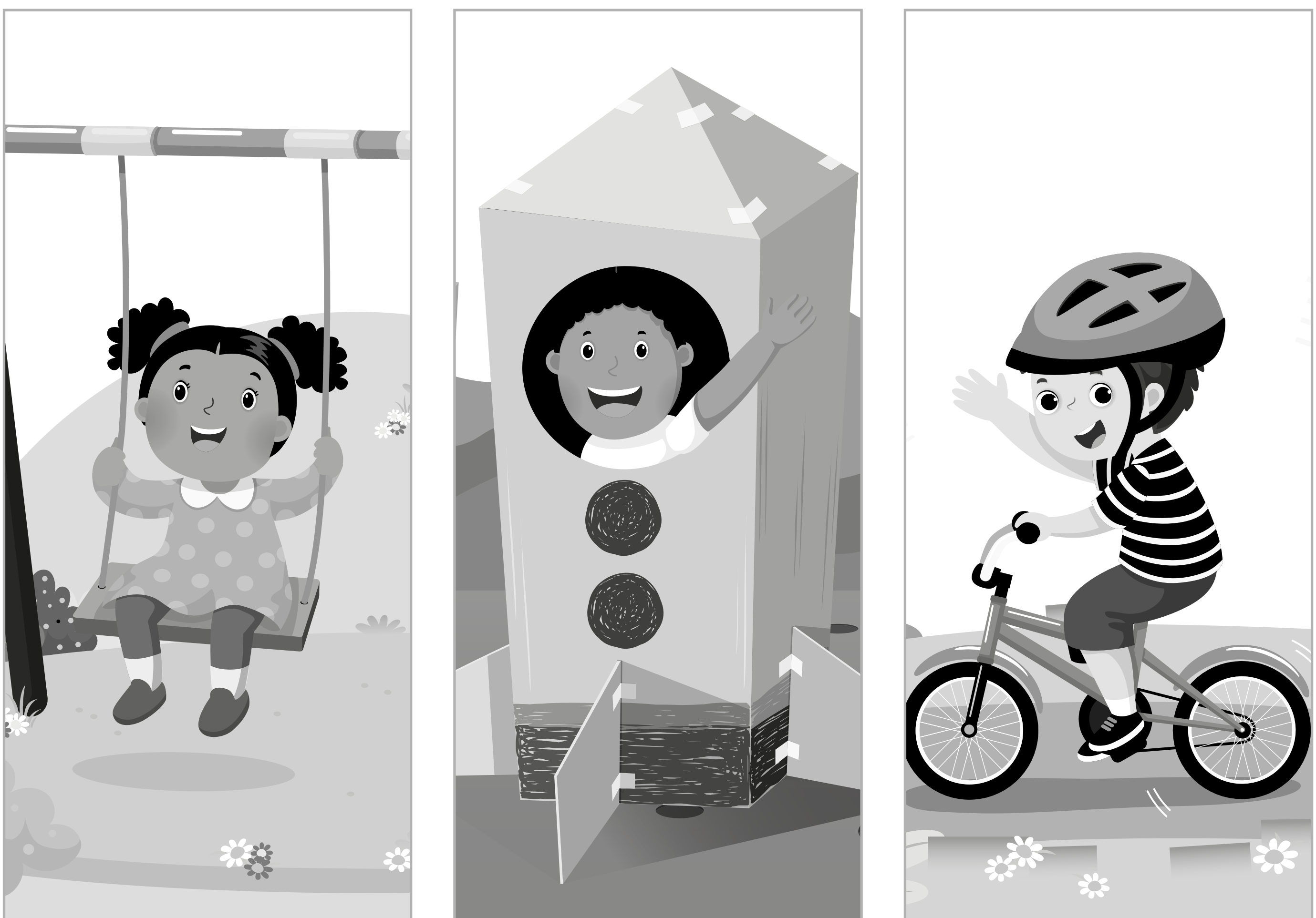
NEW

COUNTDOWN

STARTER, PRIMER A and PRIMER B COMBINED

TEACHING GUIDE

THIRD EDITION



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Introduction

New Countdown (Third Edition) Starter, Primers A, and B are the first three of eight books specially designed for the young mathematician of today's fast changing world. With their lively coloured illustrations and activity pages, these books aim to excite the imagination of the student at the very start of his or her journey in maths; they are ideal for use at the pre-primary levels.

Today's students are very proactive. The study of any topic, if not related to practical real-life, may not excite them. Their interest can easily be stimulated if we relate the topic to real-life experiences.

The approach adopted in ***New Countdown (Third Edition) Starter, Primer A, and Primer B*** is to teach the most fundamental mathematical concepts through play and engaging activities. The textbook is the primary source of exercises on various topics such as colours, line formation, shapes, size, patterns, comparisons, and number formation. This teaching guide is composed of detailed lesson plans and additional material to support teachers to adopt a flexible, student-oriented approach.

New Countdown (Third Edition) Starter, Primers A, and B cover all the concepts recommended for the learners of pre-primary level: comparison; the numbers 1-10; the concept of zero; elementary addition and subtraction; use of the number line, counting backwards; numbers in sequence (ascending and descending order); and counting to 100. And they do so in ways designed to stimulate activity: students are invited to colour and count, to draw and count, to solve puzzles and colour, to look about and discover numbers in the world about them, to note differences like big, small; more, few; find similarities, make sets, establish pairs, and begin adding and subtracting. This is very much in line with the modern approaches to mathematics teaching, which emphasise play, activity, experimentation, and practical application over old mechanical or rote learning methods.

But no maths book—even like ***New Countdown***, that combine the functions of textbook and workbook—can hope to 'cover' a subject that is so varied and so rich in teaching potential. The inclusion, in your classroom and in your day-to-day teaching, of a few simple pieces of equipment will reinforce a student's understanding of the concepts presented in the books and provide additional opportunities for communication between teacher and pupils.

About the Teaching Guide:

The key learning areas and competencies of basic mathematical concepts from the Pakistan National Curriculum for Early Studenthood Education (2007) have been added in the. Guide for teacher's guidance. It is expected that by **the end of three years of pre-primary**, students will be confident and prepared to face the challenges, and have acquired the skills of problem solving required at the higher level.

Planning your work and then implementing your plan are the building blocks of teaching. Therefore, this teaching guide provides detailed **lesson plans**, including learning objectives, learning curves, learning activities, and guidance to implement textbook exercises.

Whole class, small group, and individual activities are mentioned at the beginning of each unit. Teachers have the liberty to use any of these or the ones mentioned in each lesson plan, or any other appropriate activity of their choice depending on time and interest of their students.

Use of teaching aids is important at the beginner's level, to make the subject interesting and easy to understand. Recommendations for basic teaching aids will support learning. Teachers can prepare their own material or use any teaching aid easily available, as and when required

— Shamlu Dudya

Pakistan National Curriculum for Early Studenthood Education (2007)

Competency 1

Students will demonstrate an understanding of the different attributes of objects, such as colour, size, weight and texture, and match, sequence and classify objects based on one/ two attributes. They will also engage in pattern seeking and pattern making using different attributes of objects.

Expected Learning Outcomes: Students will begin to develop the attitudes, knowledge, and skills to:

a. Recognise, name and differentiate between colours.

b. Differentiate between the size, weight, length, width and texture of objects.

c. Arrange objects and later pictures, according to their size/ length, going from smallest to biggest. biggest to smallest, shortest to longest and longest to shortest.

d. Arrange objects and later pictures, according to their weight and width, going from lightest to heaviest, heaviest to lightest and narrowest to widest and widest to narrowest.

e. Match one object with another based on similar attributes.

f. Compare various objects and identify those that can be grouped together.

g. Sort and group objects (classify) based on a single attribute (e.g. Colour, size or weight) and later based on two attributes (e.g. Colour and size or colour and weight).

h. Observe, identify and extend patterns developed with various concrete materials.

i. Observe, identify and extend a given picture/symbol patterns.

j. Create own patterns using concrete material and pictures, and explain them.

k. Observe and identify the 'odd one out' from a given set of materials or pictures, and explain the answer.

Competency 2

Students will develop a basic understanding of quantity and simple number operations, and count from 0-9.

Expected Learning Outcomes: Students will begin to develop the attitudes, knowledge, and skills to:

a. Differentiate between 'some' and 'all' from a given set of objects, and understand that 'some' is less than 'all'.

b. Understand one-to-one correspondence.

c. Count correctly from 1-9.

d. Use numbers to represent quantities in daily life

e. Compare quantities of objects in different sets and describe which sets are equal, which have more objects, and which have less objects,

f. Begin to develop an understanding of the concept of 'zero'.

g. Identify and write correct numerals to represent numbers from 0-9.
h. Sequence numerals correctly from 0-9.
i. Identify which numeral represents a bigger quantity.
j. Identify ordinal numbers up to nine.
k. Add concrete objects in two given sets.
l. Identify the signs of addition (+) and equal to (=).
m. Substitute numerals for objects during the process of addition.
n. Use mathematical language, such as 'add' and 'makes' to describe the process of addition.
o. Use addition in daily life.
p. Remove the identified number of objects from a given set, and tell how many objects are left in the set.
q. Identify the sign of subtraction (–).
r. Substitute numerals for objects during the process of subtraction.
s. Use subtraction in daily life.

Competency 3

Students will recognise basic geometrical shapes and the position of objects in relation to each other.

Expected Learning Outcomes: Students will begin to develop the attitudes, knowledge, and skills to:

a. Recognise, name and draw two dimensional shapes, such as circle, oval, square, rectangle, and triangle.
b. Identify two dimensional shapes in their environment.
c. Draw pictures of their own choice using various shapes.
d. Understand and describe the position and order of objects using position words, such as 'in front of', 'behind', 'up', 'down', 'under', 'inside', 'outside', 'between' and 'next to'.

Competency 4

Students will develop an understanding of measurement.

Expected Learning Outcomes:

Students will begin to develop the attitudes, knowledge, and skills to:

a. Describe and compare objects using length, weight, and temperature as measurement attributes.
b. Observe various objects and estimate their weight and length.
c. Verify their estimations.
d. Understand time and mark the passage of time.
e. Sequence events in time and anticipate events.

Teaching Mathematics at the Pre-primary Level

You can make the learning of mathematics an enjoyable and enriching process by keeping a few things in mind:

Make mathematics 'reflect real-life'. The teaching of mathematics should not be limited to doing exercises in the textbook. Link each concept to aspects of students's lives at home and at school. By doing this, you will enable better understanding, retention and application of mathematics.

Emphasise the different aspects of mathematics equally. It is important to maintain equal focus on the teaching of size, symmetry, patterns, and shapes as well as numbers and counting. This contributes to developing students's mathematical sense as opposed to simple numerical competence.

Where possible, link the teaching of mathematics with other subjects. Students have relatively few opportunities to use numbers and other mathematical ideas as compared to languages. By relating mathematics with art, music, and language, you can broaden the scope for application of mathematics in real-life situations (e.g. use number poems, number stories, etc).

Engage with parents and encourage them to play an active part in developing the mathematical competency of their student. Students understand mathematical concepts better when they are given opportunities to explore mathematical skills at home.

A student-centred approach that addresses the unique learning needs of every student needs to be adopted. A one-size-fits-all approach must be avoided, because some students may not understand what is being taught. The lack of sufficient opportunities in the wider environment for students to apply mathematical knowledge increases the chances that students will stop taking interest in the subject.

To address the challenge of working with students of differing abilities, teachers must help students to acquire mathematical skills instead of having concepts imposed on the mind through various 'teaching techniques', for them to use 100% of their capacity. More able students can be given a few additional exercises along similar lines to use their maximum potential, while students with limited learning skills must be allowed to continue work at their own pace.

It must be emphasised here that students love to hear encouraging words such as 'Good', 'Well done', or 'Keep it up' as often as possible. A gentle pat on the back can also be very encouraging.

Developing Motor Skills

Particular attention should be paid to the development of fine motor skills in pre-primary level. Here are some interesting activities you can organise alongside the regular teaching activities in order to build students's motor skills simultaneously. These skills will teach them the correct way of holding a pencil in order to draw lines and shapes, and form numbers on the page.

Clay Work

Working with play dough and soft modelling clay is a great way to develop students's fine motor skills. The activity on page 1 of the textbook requires students to fashion a rudimentary stamp out of modelling clay. Through this activity, they can learn to manipulate clay through rolling, squeezing and pressing actions.

Clay work can be used when working through other units of this book, including the units on 3D shapes, size, patterns, and counting. Students can be asked to create various shapes out of modelling clay, make clay eggs or a given number of patties, and so on.

Finger Painting

Finger painting can be an excellent way to develop finger and hand muscles while learning about colours. Finger painting develops colour identification among the students as well as their hand-eye coordination.

You can use finger painting activities when addressing unit 1 on colours as well as subsequent chapters on numbers. For example, the students may be asked to make 'x' number of fingerprints in a certain colour and 'y' number of fingerprints in a different colour. There are many more activities you can devise depending on the interest and abilities of the students.

Sand Play

The sandpit is simply a tray of reasonable size and depth that is partially filled with sand. Sandpit activities are an effective precursor to drawing lines and writing of numbers with a pencil. Simply leaving the students to play in the sandpit can aid the development of motor skills as they learn to use toy buckets and spades to move the sand around.

The students can be asked to practise drawing straight and curved lines as well as the numbers from 0 to 9 in the sand with a finger. Doing this will help them acquire control over moving their fingers to form a specific number or line before they learn to write with a pencil. Salt could be substituted for sand.

Threading Activities

You can use various threading activities to develop colour, size, shape, pattern, and number concepts. Beads and buttons of different shapes, colours, and sizes can be used. Handling light thread or string can be difficult for students at this stage; you can use pipe cleaners if they are easily available. Alternatively, you could take craft wire and glue some soft felt around it to make it safe for young students.

You can use threading activities to ask students to make strings of beads of a certain colour or colours, shapes (e.g. use only cylindrical beads, or use one spherical and two oval beads in a pattern), patterns (e.g. small blue bead followed by big yellow bead), numbers (5 green buttons and 7 red buttons), and so on.

Building Blocks

Building blocks are popular toys but they can be used in the classroom to teach various mathematical concepts. By playing with building blocks, students learn to form stable structures, group similar objects, and create order. Their spatial skills and hand-eye coordination are enhanced.

Building block activities help develop colour concepts (e.g. stacking red blocks only, or red and blue blocks only), shapes (e.g. create a cube or cuboid structure with the blocks), patterns (e.g. build one tower with three blocks followed by one with four blocks, and so on), and numbers (e.g. build a tower with 'x' number of blocks, etc.).

Sorting

Sorting games are effective because they can be organised as individual play, pair activities, or group games. Different objects such as beads, marbles, shells, and toys can be used and students can be asked to sort them according to colour, shape, size, and number.

Developing Pencil Grip

Students at the pre-primary level are intuitively comfortable holding a pencil in their fist. The initial exercises in the textbook involve colouring for which the student may be excused for gripping a crayon or coloured pencil in their fist. When the student is required to draw straight and curved lines, and write numbers in later units, teaching the correct pencil grasp is important.

One of the ways in which you can do this is to develop the pincer grasp. The pincer grasp involves the use of the thumb and index finger and can be developed easily in pre-primary school students. The various activities described above would already have developed some degree of fine motor skills.

How to teach a student to hold the pencil correctly, follow these steps:

Step 1: Lay the pencil on the table and ask the student to hold it near the point with the index finger and thumb.

Step 2: Help the student raise the hand so that the pencil hangs vertically from the pincer grasp.

Step 3: All you need to do is hold the opposite end of the pencil and bring it all the way back to place it in- between the thumb and index finger of the student. The pincer grasp is used as a pivot and thus stays in place.

The student is now holding the pencil in the correct way. With some practice, the student will be able to do this independently.

Developing a Positive Attitude Towards Mathematics

Students are born with a mind which is thinking, receptive, and ready to try out new things. So it has vast a potential to grow unless circumstances throttle it. The two aspects most essential for this growth are the two Rs, i.e. 'Reading and Riting' and both of them are dependent on each other.

The primary objective of the Countdown series is to ensure that every student develops a strong affinity for mathematics (as against a fear for it). And, for this, the following are necessary:

- Concentration
- A sense of fun
- Retentive memory

- A sense of discovery and learning (rather than "being taught")
- Understanding of the subject in a creative, logical, and lateral manner
- Individual, easy pace of learning for each student
- A sense of confidence
- Affectionate bonding with the teacher

Teachers need to take the age group of the students into consideration, and help them learn in a manner suitable to their age.

Building the Concentration

This can start with the students shaking their arms and legs while standing at their individual positions and giving out a jolly good laugh! Look right, look left, raise your right hand, and thump your left foot It may sound crazy, but it does help to make a good beginning for the day.

This is followed by a round of meditation. All students sit down, close their eyes, and mentally focus on whatever they wish—be it a beautiful scene on a beach, a colorful flower or the face of his/ her mother. They sit in this posture for a minute or two, to start with, and then go on to increase this duration up to five minutes.

The kind of concentration students are likely to develop through this focusing exercise will stay with them for many hours. In fact, this can be repeated after lunch break, once the students are back on their seats.

Note: It is essential to mention here that teachers do not mix this focusing exercise with religious meditation, as a matter of respect for the multi-religious societies we live in.

Memory Retention and Fun

All learning needs to start with practical activities in a garden or in the classroom or on the board. This makes learning enjoyable and fun-filled.

Such an approach also goes a long way in making memory retentive. Rote learning, at the most, uses two senses—listening and seeing (reading) whereas activities involve touching (doing) all the time, and smelling and tasting too, on a few occasions. The sense of joy or pleasure in discovering new things, which is missing in rote learning, is a great accelerator for learning.

The greater the number of senses used during a learning exercise, the better the concentration will be, along with better subsequent understanding, retention, and application. The joy that students derive out of such a learning experience would be an added bonus. Formal textbook learning leads to vertical learning, such as: 2 + 1 = 3; so 3 + 1 = 4 and so on.

Nowadays it is important that students think, learn, and apply their knowledge laterally, i.e. they are actually able to apply the things learnt by them to their environment, throughout the day.

Discovering, Learning, and Understanding the Concept

Students learn something new every minute as they discover. Each discovery is a result of a practical activity and without practical activity proper grasp of the subject is not possible.

A student may recite a poem like '1 + 1 = 2' and '1 + 2 = 3' and so on. But unless these numbers are connected to the physical world by presenting the above sums as say, '1 marble put together with 1 more marble gives 2 marbles' and '2 marbles put together with 1 more marble gives 3 marbles', the entire number sequence makes little sense.

After a start like this, the student's sense of curiosity will be heightened and will remain with him/her throughout life lending it a dimension that many adults have never experienced.

Additional Knowledge

Students may start with the 5 colours on page 5 of Primer A, but when they are out in the garden that has, say, pink or purple flowers, then these colours must also be included in the activities performed.

This leads to the discovery of many more colours. So observation and vocabulary improve, leading to a major jump in learning.

Check the Pace of Learning

In this 'open' method of learning, it is possible to include students with different learning abilities. Every student works at his/her own pace without being singled out. With greater exposure, he/ she will eventually fall in line with the majority, and hence slow learners will not feel a sense of failure.

Building Self-Confidence

Being in a familiar and friendly environment itself is a confidence-building exercise. The more relaxed and confident a student is, the easier it is for him or her to absorb new concepts as the year progresses.

Bonding with the Teacher

Students are born with a mind which is thinking, receptive, and ready to try on new things. So it has a vast potential to grow if handled properly by the teacher.

A happy and fun-filled atmosphere, with a relaxed teacher, leads to a greater bonding between the students and the teacher. This is very important at the levels of Primer A and B, and cannot be overemphasized. A comfortable, tension-free atmosphere leads to healthier mental growth.

Features of the Lesson Plan

This guide contains lesson plans that cover all the units and concepts covered in the textbook. These plans are flexible and can be adapted to the specific needs of your learners and the classroom environment.

- The **objective** can be used as a starting point to plan the lesson. It can also be used as a benchmark to assess whether the lesson has been delivered effectively or not.
- The **learning curve** orients you in the direction the current lesson should take. It helps you to base the lesson on specific understanding and skills that the students have learnt in previous lessons. It indicates the extent to which the new lesson content must be established in order to serve as the foundation for more complex concepts and skills. The initial question when planning a lesson should be how much do the students already know about the topic? If it is an introductory lesson, then a different approach is to be adopted. You can start with an interesting story, use resources, or ask questions which will lead to the to the new topic.
- The **learning resources** include the objects that you will need to achieve the learning outcomes. Most of the learning resources are those that are commonly used in the pre-primary classroom. Flash cards, objects, charts, and any age appropriate material. You are free to substitute materials that are more readily available and that you believe will enhance the students's understanding.
- The **learning activities** offer detailed, step-wise guidance and help students to achieve the cognitive and skills objectives. You can follow these steps as written or modify them to suit your specific needs. These activities build the conceptual foundation in a play-oriented environment which supports the completion of exercises in the textbook. Step-wise instructions are also provided for teaching the concepts and completing the exercises in the textbook.

  The approximate time required for each exercise is also indicated to guide planning, but the teacher has the discretion to either extend or shorten the time frame as required. Generally, class dynamics vary, so flexibility is important. The teachers can adjust the teaching time depending on the receptivity of their class, as some topics take longer, while the others tend to take less time.
- **Wrap up activities**, tips, and suggestions are offered to help teachers in setting up maths corner, where hands-on activities can be conducted or students's work is displayed. You can incorporate these suggestions for further reinforcement.

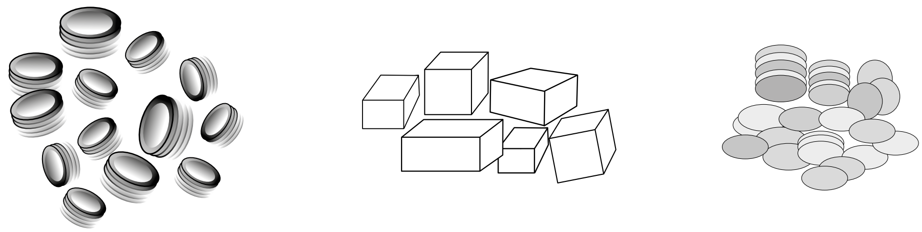
Lesson Plans

Whole class, small group, and individual activities are mentioned at the beginning of each unit. Teachers have the liberty to use any of these or the ones mentioned in each lesson plan, or any other age appropriate activity of their choice depending on time and interest of their students.

Teaching and Learning Resources

Here are recommendations for basic teaching aids at this beginner's level.

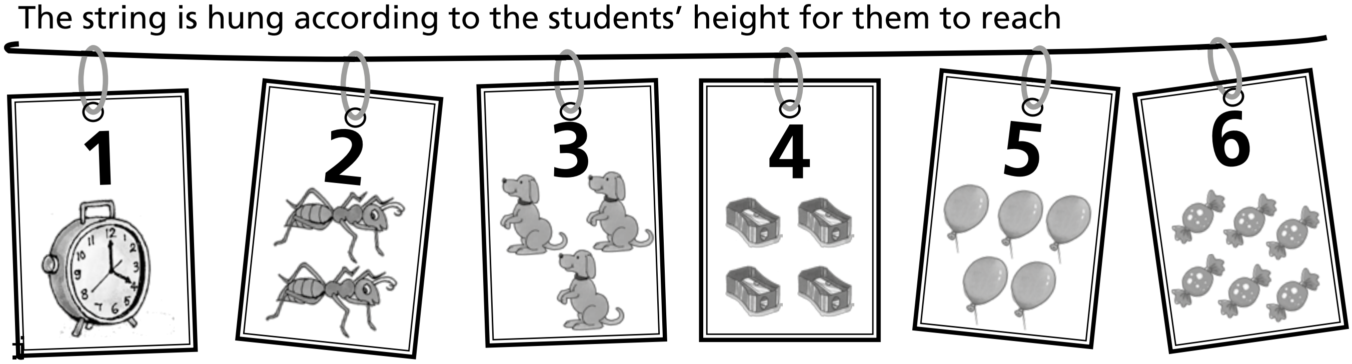
Counters: Any material which a teacher can manage to collect for counting e.g. bottle caps, shells, beads, etc.



Feely Bag: A small bag/ pouch, ideally made up from cloth so that the objects inside the bag are not visible from outside. Different small objects are placed in this bag (as per the need) for the students to feel and recognise objects without seeing them.



Washing Line: A string which is around 1 metre long, hung on a wall.
The string is hung according to the students' height for them to reach

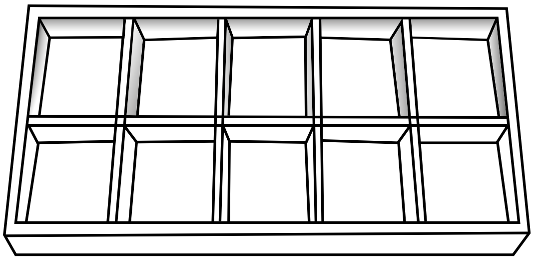


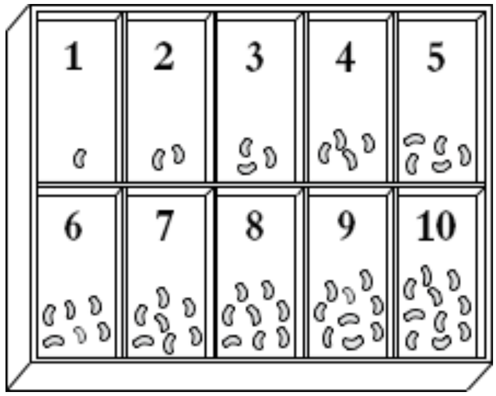
Objects for Sorting and Comparing

Encourage students to bring small collectibles into the classroom: beads, shells, buttons, marbles, twigs of different lengths, pencils and crayons of different thicknesses. A special table could be set aside for these. Make sure that coloured counters and dice are readily available. And ensure you a have a variety of solid shapes on hand: balls, globes, tins, cubes, boxes etc. Encourage the students to discover fresh examples of these shapes.

The Sorting Tray

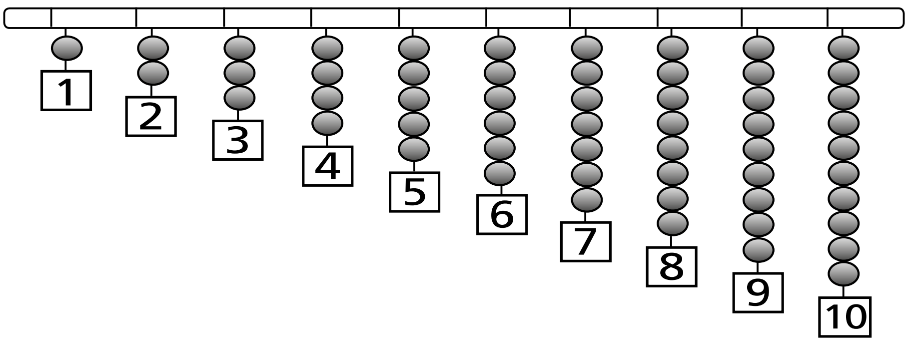
All you need is a broad, flat box or tray, divided (perhaps by strips of cardboard) into compartments. This has almost endless possibilities: it can be used for sorting the students's small collectibles into sets of every variety: sets of size, sets of colour, sets of number, and many more.





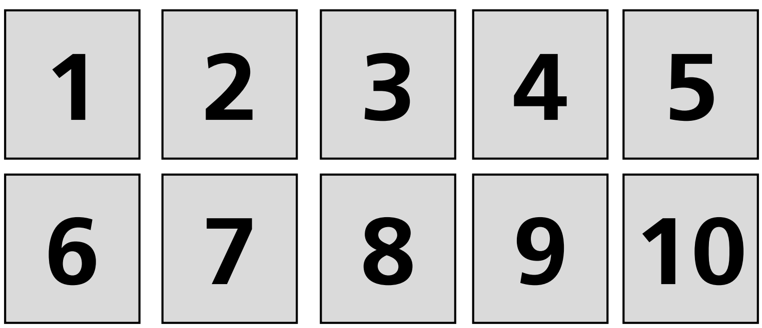
The Bead Bar

Here you need a long wooden rod with 10 evenly spaced holes along it. Suspend lengths of wire through the holes, each hooked at the bottom for cards to hang from. On each wire hang beads made from clay or wood and painted brightly.

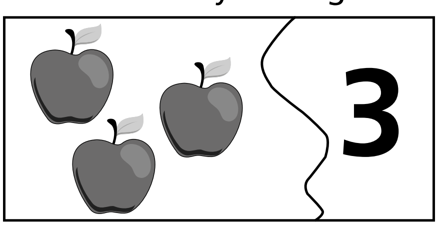


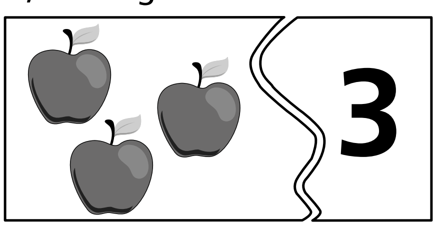
Number Cards

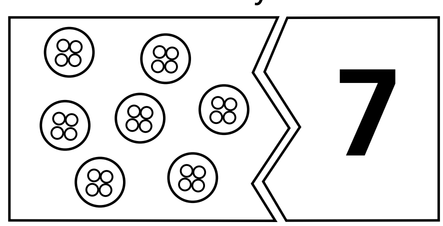
Ready-made cards, displaying one number on each card. If ready-made cards are not available, the teacher can take the printouts of numbers (2.5″ × 3″) and laminate them.



Make a set of cards covering the numbers 1 to 10. Each card should have a drawing on one side and the relevant numeral on the other. The teacher then separates the set and the numeral by cutting the card, making sure to cut each card a different way:







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Mix the cards and ask the students to fit them together again. If the two parts do not fit together properly, the student will know that the cards are mismatched and he/ she is joining the wrong picture and number.

Giant Number Line

Make sure you have a large, colourful number line 0-10 on permanent display. .

Colourful Pictures

Pictures of animals, cars, buses, and flowers, etc. should be displayed prominently to make your classroom, a bright and happy place, and many examples of objects that you can include in your maths lessons, along with lots of work stations.

Laminated Templates: An un-attempted, reusable worksheet which is laminated/ plastic coated for the students to work on with board markers so that the work can be erased and the worksheet can be used again and again.

NEW

COUNTDOWN

STARTER

THIRD EDITION

TEACHING GUIDE



1 Colours

Suggested Activities

Activity 1: Keep a week aside for each colour discussed.

- On 'red day', every student brings a red object from home. A collection of red apples, capsicums, tomatoes, roses, and other red objects. 'Red' remains constant, but the shapes are diverse, ranging from a ball to an apple, hat, pencil, rose, etc.

  Similar activities may be conducted with the colours blue, green, and yellow.
- On 'blue day', you could take the students outside and draw their attention to the blue sky and blue flowers
- On 'green day', the students could be taken out for a walk in the playground to observe the green grass, leaves, and vegetables being cultivated.

Activity 2: Display charts showing different coloured objects: red on one, blue on another, yellow on the third, and so on.

- From a box of assorted toys, students can be asked to pick out 1 blue hat, 2 red shoes, 3 green marbles, etc.

Whole Class Activity (10 min)

Colour Game — Make 4 square outlines (3ft × 3ft) outside the classroom with the help of red, blue, green and yellow coloured tape. Take students outside, divide them into two groups, A and B.

Maintain a score board and let each student take a turn. For example ask any student of Group A to stand in the red square. If the student correctly follows the instruction, give one star to the group. Similarly give the instructions to Group B student to stand in the blue square and so on. The group that gets more stars will be the winner.

Small Group Activity (10 min)

Divide the class into four small groups. Take four boxes of play dough (red, blue, green, and yellow) and give each group a box of any one of the four colours. Let each group make different objects with the given colour and present it to the whole class.

Individual Activity (10 min)

Necklace making — Give multi-coloured ring crackers (7 to 8) to each student along with a small piece of string. Let each student make his/ her own colourful necklace with the string and crackers.

Sorting colours — Take the counters/ beads of red, blue, yellow and green colour (8 to 10 counters/ beads of each colour). Also take similar coloured bowls. Ask students to sort and put the counters/ beads in the respective coloured bowl.

Lesson 1: Colours

Objective

By the end of this lesson, the students should be able to identify the colours blue, red, yellow, and green in their immediate environment.

Learning Curve

The students may be familiar with probably blue, red, yellow, and green colours, especially if their parents have been teaching them. They can now be introduced to the colours blue, red, green, and yellow by showing various toys and other everyday objects in these colours. They should be able to sort objects by colour.

Learning Resources

Modelling clay (play dough), plastic trays, poster paints (blue, red, green, and yellow); flowers, buttons, building blocks, beads, pieces of fabric, etc. in the four colours, and four transparent plastic bins.

Learning Activity (20 min)

Step 1. The different objects should be spread on the floor or work area and the students given some time to sort them out according to their colour.

Step 2. Stick a band of paper in one of the four colours on one side of each bin to designate them as blue, red, green, and yellow bins.

Step 3. Pick one of the bins at random and ask the students, one by one, to fetch an object that matches the colour of the bin and place it there. Call out the name of the colour and ask the students to repeat it out loud after each successful attempt.

Step 4. Repeat this until all the objects have been sorted into the correct bins.

Textbook Practice Pages

Page 2 (15 min)

Step 1. Place some poster paint in the four trays in the work area.

Step 2. Demonstrate how students can take some modelling clay and shape it into a ball. Then demonstrate how to flatten the base by pressing it against the floor or tabletop. Since students's motor skills are not very well-developed, they may require some practice to get the rolling movements right.

Step 3. The students should then dip the stamp into the paint tray and stamp inside the circles of the matching colours on page 2.

Wrap up Activity (5 min)

The students can be divided into four groups and each corner of the classroom be designated a different colour, e.g. red corner, green corner, and so on. Each group may then be asked to decorate each corner with objects of that colour, e.g. using blue toys, pictures, scarves, etc. to decorate the blue corner, and so on.

Lesson 2: Colours

Lesson 2 is a continuation of the previous plan, where students have learnt to distinguish between blue, red, yellow, and green objects in their surroundings.

Learning Resources

String, paper circles in the four colours, beads or blocks in the four colours, and glue.

Textbook Practice Pages

Page 3 (20 min)

Instructions:

Step 1. Ask the students to identify the colours of the paper circle in each string on page 3.

Step 2. Place the paper circles sorted by colour in three trays in the work area. Point to one string on the page and ask the students to identify the tray with the matching paper circles.

Step 3. Demonstrate how students should pick a paper circle, dip one side into the glue, and then paste it in the correct circle on the page. You may have to help the students get it right by holding their hands and guiding them initially.

Similar activity can also be done by placing a bowl of blue, red, green, and yellow beads and few 12 inch pieces of strings on the table.

Pick up a string and tie a knot on one side and then demonstrate how to put beads on the string. Ask the students to pick up beads of any colour, one at a time and put it on the string forming their own colour patterns.

Page 4 (5 min)

Step 1. Ask the students to identify and name the colour of each balloon on the page.

Step 2. Repeat this with the paint bucket at the bottom of the page. Ask them to match balloons and paint buckets of the same colour.

Step 3. Help the students trace the line joining the blue balloon and paint bucket with their finger.

Step 4. Demonstrate how the students should hold a pencil and draw lines to match each balloon to a paint bucket of the same colour. Ask the students to continue until the exercise is complete.

Page 5 (5 min)

Complete the task on page 5 as done for page 4.

Page 6 (10 min)

Step 1. The students may now learn to draw circles with crayons of different colours.

Step 2. Go over the pictures with them. First, help them identify the objects shown on the page. Next, ask them to state the colour of each object.

Step 3. Read out the questions, one by one, on the page and ask the students to identify the correct object. Repeat the question if the students identify the wrong object.

Step 4. Place several blue, red, yellow, and green crayons in the work area and ask the students to pick up the colour required in the question. Then, help them to draw a circle around the correct object.

2 Comparison: Part One

Suggested Activities

➢ **Few and Many**

Whole Class Activity (10 min)

Take the students to the school playground and let them observe the things that are 'few' and 'many'. For example 'many leaves', 'many plants', 'few flowers', 'few birds' etc.

Small Group Activity (10 min)

Divide the class into small groups. Mix the crayons of any two colours in a basket for each group. One colour should be 'few' in number and the other colour should be 'many'. Let the students sort both the colours and place 'Many' crayons in the basket and 'Few' crayons on the table.

Individual Activity (10 min)

Give a paper with two trees drawn on it. Let students do finger printing with red paint to make a few apples on one tree and many apples on the other.

Lesson 1: Few and Many

Objective

By the end of this lesson, the students should be able to distinguish between a few objects and many objects.

Learning Curve

The students are likely to have come across few and many objects, fruit, and toys. Hence, their awareness of concepts such as few and many may be enhanced further at this level.

Learning Resources

Objects such as balls, fruit, pencils and toy cars, etc.

Learning Activity (20 min)

Step 1. Bring different types of candies. Put any two types of candies in a basket. One type of candies should be 'few' in number and the other type should be 'many'.

Step 2. Take out one candy at a time and put them on the table, making two groups of two different types of candies.

Step 3. Point towards the smaller pile of candies and say 'few candies'. Then point towards the bigger pile and say 'many candies'.

Step 4. Replace the candies by two other types. Make groups of few and many. Ask the students to repeat your words few and many.

Step 5. Repeat this exercise with other available objects.

Note: Later candies can be distributed among the students.

Textbook Practice Pages

Page 7 (20 Minutes)

Step 1. Ask the students to identify the group of 'few' buttons.

Step 2. Next, ask them to identify the group of 'many' cupcakes.

Step 3. Ask them to identify the group of 'many' donuts and put a tick on the group.

Step 4. Next, ask them to identify the glass with 'few' crayons.

➢ More and Less

Whole Class Activity (5 min)

Let students observe the things in the classroom that are more or less in number. For example more pencils, less erasers, more windows, less doors etc.

Small Group Activity (10 min)

Give students crayons of different colours, mixed up in a basket in different quantities. For example, if there are ten red crayons, 10 blue crayons, 3 yellow crayons, 2 green crayons. Ask them to sort all colours and tell which are more or less.

Individual Activity (10 min)

Give laminated templates to the students with pictures of sets of more and less objects (similar to the ones given on page 8). Let the students tick/ circle the sets with more objects with the markers. Have 5 to 6 templates in the class with different sets of pictures.

Lesson 2: More and Less

Objective

By the end of this lesson, the students should be able to distinguish between more and less objects.

Learning Curve

The students are likely to have come across more and less objects, crayons, and books. Hence, their awareness of concepts such as more and less may be enhanced further at this level.

Learning Resources

Objects such as balls, fruits, pencils and toy cars, etc.

Learning Activity (20 min)

Step 1. Bring balloons of different colours and shapes, and make two groups with less and more balloons. Call out two students and let them hold each group.

Step 2. Point towards the group which has more balloons and say 'more balloons'. Then point towards the group with less balloons and say 'less balloons'.

Step 3. Repeat this exercise with other available objects.

Textbook Practice Pages

Page 8 (20 min)

Repeat the exercise on the page with other objects.

➢ Full and Empty

Whole Class Activity (10 min)

Let the students observe their water bottles in the morning to see if they are full or not. Motivate them to drink a lot of water and then at the end of the day let them check if their bottles are empty or not.

Small Group Activity (10 min)

Place two bowls on a tray, fill one bowl with rice and let the other bowl be empty. Provide spoons according to the number of students (ideally 3 to 4). Ask the group to shift the rice from one bowl to the other bowl using the spoon to empty the full bowl of rice.

Individual Activity (5 min)

Pouring beans from jug to jug: Place two mini jugs on a small tray. Fill one jug with beans and let the other jug be empty. Let the students pour beans from one jug to the other jug and observe full and empty jugs.

Lesson 3: Full and Empty

Objective

By the end of this lesson, the students should be able to distinguish between full and empty containers.

Learning Curve

The students are likely to have come across empty and full water bottles, glass, jug, and teacups. Hence, their awareness of concepts such as empty and full may be developed at this level.

Learning Resources

Bowls, jug, glass, rice, beans, plastic bottles, plastic cups, paper cups, tray.

Learning Activity (20 min)

Bring a jug full of water and a few empty glasses. Point towards the jug and say 'full', then point towards the glass and say 'empty'. Now pour all the water from the jug into the glasses. Ask the students which container is empty and which is full. Let the students observe them and then say the 'jug is empty' and the 'glasses are full'.

Textbook Practice Pages

Page 9 (20 min)

Repeat the exercise on the page as done for previous lessons.

➢ **Hot and Cold**

Whole Class Activity (10 min)

Feeling Activity — Take two metal or plastic bottles. Fill one bottle with hot water and the other bottle with cold water. Close the cap tightly so it is safe for the students to feel. Let each student feel the hot water bottle by holding it with both hands and then a cold water bottle. Each time a student feels the bottle let him/ her use the vocabulary 'hot' and 'cold'.

Small Group Activity (10 min)

Make cards of different objects that are hot or cold. For example pictures of sun, hot coffee, soup, fire, iron etc. can be used for the concept of 'hot' and pictures of ice cream, ice-cube, snow, snowman, juice etc. can be used for the concept of 'cold'. Let the students separate the cards of hot and cold objects.

Individual Activity (5 min)

Make a laminated template with pictures of hot and cold objects on it. Let students circle the hot objects and cross the cold objects with the help of board markers.

Lesson 4: Hot and Cold

Objective

By the end of this lesson, the students should be able to distinguish between hot and cold.

Learning Curve

The students have learnt to have come across hot and cold water bottles, glass of milk, and juices. Hence, their awareness of concepts such as hot and cold may be enhanced further at this level.

Learning Resources

Hot water bottle, ice cubes, glass of juice, hot tea

Note: Extra care should be taken for the safety of students while using hot and cold objects.

Learning Activity (20 min)

Step 1. Point towards the hot teacup given on top of page 10 and tell the students that it is 'hot'. Now, point towards the fire and say it is also 'hot'.

Step 2. Next point towards the ice cream and ice-cubes and tell the students that both are 'cold'.

Step 3. Repeat this exercise with other available objects and ask the students to repeat your words.

Textbook Practice Pages

Page 10 (20 min)

Step 1. Ask the students first to identify cold objects and then colour them blue.

Step 2. Next, ask them to colour the remaining hot objects red.

3 Lines

Suggested Activities

➢ **Straight Lines**

Whole Class Activity (10 min)

Make a straight line with the help of paper tape outside the classroom. Let the students observe and then walk on that line one by one.

Students can be walked across a garden from one corner to the diagonally-opposite corner in a straight line.

Small Group Activity (10 min)

Give play dough to the students to make straight lines.

Individual Activity 1 (10 min)

Let the students draw straight lines in the playground using chalk. Students can also be asked to draw straight lines in sand using a stick. You can mark two points in the sand and ask students to join the two, by tracing a straight line in the sand.

Individual Activity 2 (10 min)

Step 1. Place the objects randomly on the table.

Step 2. Explain that as you will call out the name of an object, the students are to pick them from the pile and arrange them in a straight line in their work area.

Step 3. Call out the names of the objects and guide the students as they put them in a straight line. You can reinforce the concept of colours by calling out 'blue block', 'red bead', and so on. Correct any deviations in the straightness of the line.

Step 4. Once all objects have been called out, ask the students to trace a straight line below their train of objects with a finger. Repeat this several times.

Lesson 1: Horizontal Lines

Objective

By the end of this lesson, the students should be able to draw horizontal lines.

Learning Curve

The students have developed skills in holding pencils and crayons and drawing lines and circles. In this lesson, they should learn how to draw horizontal lines using a pencil.

Learning Resources

Beads, toy cars, building blocks, and pencils

Learning Activity

Activity (20 min)

Step 1. Ask the students to stand together in the centre of the room.

Step 2. Explain that as you call out the name of each student, he or she is to walk up to you and line up shoulder-to-shoulder with the previous student. The objective is to teach students what a straight line is.

Step 3. Call out the names of the students one by one. You may ask the other students to clap as the student walks up to the correct position in the line. If a student falls out of line, ask him/her to move a bit so that they are aligned next to the student to their right. Reinforce by stating that the line has to be straight.

Textbook Practice Pages

Page 11 (20 min)

Step 1. Explain that the students will now learn to draw a straight line on the page.

Step 2. Point to the rabbit and ask what it is. Next, point to the carrot and explain that it is the rabbit's food and that the rabbit needs to get to it.

Step 3. Ask how the rabbit can get to the carrot. Trace your finger along the dotted line. Do this slowly and explain that the rabbit is getting closer and closer to the carrot. Once your finger reaches the carrot, ask the students to clap.

Step 4. Ask the students to follow the dotted line with a finger.

Step 5. Now, demonstrate how to draw a straight line with a pencil by joining the dots from the rabbit to the carrot.

Step 6. Repeat with the cat and the milk.

Step 7. Ask the students to complete the straight lines on the page.

Lesson 2: Vertical Lines

Objective

By the end of this lesson, the students should be able to draw vertical lines.

Learning Curve

The students have developed skills in drawing horizontal lines with a pencil. They should now learn how to draw vertical lines.

Learning Resources

Beads, toy cars, building blocks, and pencils

Learning Activity

Activity (20 min)

Step 1. Place the objects randomly on the table.

Step 2. Explain that as you will call out the name of an object, the students are to pick them from the pile and arrange them in a straight line in their work area.

Step 3. Call out the names of the objects and guide the students as they put them in a straight line. You can reinforce the concept of colours by calling out 'blue block', 'red bead', and so on. Correct any deviations in the straightness of the line.

Step 4. Once all objects have been called out, ask the students to trace a straight line below their train of objects with a finger. Repeat this several times.

Textbook Practice Pages

Page 12 (10 min)

Step 1. Explain that the students will now learn to draw a vertical line on the page.

Step 2. Point to the fruits and the students standing beneath the trees. Ask the students what is happening in the picture. What do the students in the picture want?

Step 3. Trace your finger along the dotted line and explain that this is how the fruit would drop into the student's hands.

Step 4. Ask the students to follow the dotted line with a finger.

Step 5. Now, demonstrate how to draw a vertical line with a pencil by joining the dots from the fruit to the student.

Step 6. Repeat the same exercise with the other two students on the page.

Step 7. Ask the students to complete tracing the straight lines on the page.

You can demonstrate the falling of a small ball from the top of a desk. The object takes a straight vertical path to the floor.

Page 13 (10 min)

Step 1. Explain that Nina needs to get to her teddy bear.

Step 2. Ask the students to trace the dotted line that connects Nina to the toy.

Step 3. Ask the students to join the dots with a pencil.

➢ **Zigzag Lines**

Whole Class Activity (10 min)

Take the students around the school to hunt for zigzag patterns.

Small Group Activity (10 min)

Draw a zigzag pattern in the playground using chalk and ask students to walk along the pattern.

Individual Activity (10 min)

Let each student make zigzag patterns using playdough.

Lesson 3: Zigzag Lines

Objective

By the end of this lesson, the students should be able to draw zigzag lines.

Learning Curve

The students have developed skills in drawing straight lines with a pencil. They will now learn how to draw zigzag lines.

Learning Resources

Sandpit and pencils

Learning Activity

Activity 1 (10 min)

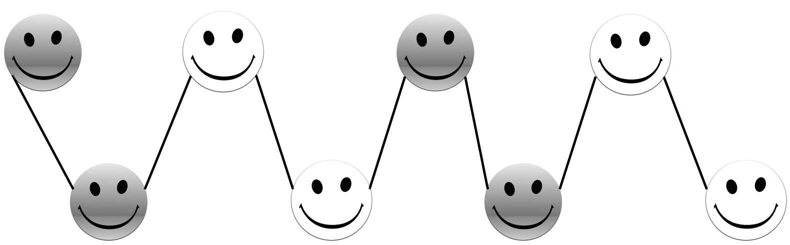
Step 1. Introduce zigzag lines by tracing one with a finger in a sandpit. Students, one by one, repeat the same.

Step 2. You could ask the students to draw straight and zigzag lines alternately to familiarise them with the different forms of lines.

Step 3. Now, trace a zigzag line in the air with a finger and ask the students to do the same. Ask them to trace zigzag lines on different surfaces such as the floor, the tabletop, the window, and so on.

Activity 2 (20 min)

Ask students to stand as shown in the figure below. Give them a long string or rope and ask them to hold it to form a zigzag line. Ask another student to move his hand along the rope and identify the type of line.



Textbook Practice Pages

Page 13 (10 min)

Step 1. Explain that the mouse wants to eat the cheese.

Step 2. Ask the students to trace the dotted line that connects the mouse to the Cheese.

Step 3. Ask the students to join the dots with a pencil.

Step 4. Tell the students that now the mouse wants to go home. Ask the students to trace the dotted line that connects the mouse to his home.

Step 5. Ask the students to join the dots with a pencil.

➢ **Curved Lines**

Whole Class Activity (10 min)

Make a curved line with some chalk, in the playground. Let the students observe and then walk on that line. Students can also be asked to draw curved lines in sand using a stick. You can mark two points in the sand and ask students to join the two by tracing a curved path.

Small Group Activity (10 min)

Give playdough to the students to make curved lines. Students work with balls. One student throws the ball up in the air to be caught by another student. The ball would normally follow a curved path.

Individual Activity (10 min)

Let the students trace curved lines on a laminated template (similar to the ones given on page 14) with markers.

Lesson 4: Curved Lines

Objective

By the end of this lesson, the students should be able to draw curved lines.

Learning Curve

The students have developed skills in drawing straight lines with a pencil. They will now learn to draw curved lines.

Learning Resources

Sand pit and pencils

Learning Activity

Activity 1 (10 min)

Step 1. Introduce curved lines by tracing one with a finger in a sandpit. Students, one by one, repeat the same.

Step 2. You could ask the students to draw straight and curved lines alternately to familiarise them with the different forms of lines, straight and curved.

Step 3. Now, trace a curved line in the air with a finger and ask the students to do the same. Ask them to trace curved lines on different surfaces such as the floor, the tabletop, the window, and so on.

Activity 2 (10 min)

Ask one student to stand behind another and trace a straight horizontal, straight vertical, or curved line with a finger on his/her back. The student is required to correctly identify the type of line.

Textbook Practice Pages

Page 14 (10 min)

Step 1. Explain that they will now learn to draw a curved line on the page.

Step 2. Help the students identify the objects shown on the page. You may also ask them to act out how these objects are used.

Step 3. Explain that the outlines of these objects can be drawn by joining the dots with a pencil.

Step 4. Select one of the objects and trace along the dotted lines with your finger.

Step 5. Now, join the dots with a pencil.

Page 14 (10 min)

Step 1. Explain that they will now draw a curved line on the page.

Step 2. Point to the kangaroo and explain what it is. Next point to the grass and explain that the kangaroo is hungry and needs to get to the sweet grass. How should it get there?

Step 3. Trace your finger along the dotted curved line and explain that this is the path the kangaroo would follow.

Step 4. Ask the students to follow the dotted line with a finger.

Step 5. Draw a curved line with a pencil by joining the dots from the kangaroo to the grass.

Step 6. Ask the students to trace the dotted lines on the page.

➢ Wavy Lines

Whole Class Activity (10 min)

Make a wavy line with some chalk in the playground. Let the students observe and then walk on that line.

Small Group Activity (10 min)

Let students draw wavy lines on the floor with the chalk.

Individual Activity (10 min)

Let the students trace wavy lines on a laminated template (similar to the ones which are given on page 15) with board markers.

Lesson 5: Wavy Lines

Objective

By the end of this lesson, the students should be able to draw wavy lines.

Learning Curve

The students have developed skills in drawing straight and curved lines with a pencil. They will now learn how to draw wavy lines.

Learning Resources

Sandpit and pencils

Learning Activity (10 min)

Activity 1

Step 1. Introduce wavy lines by tracing one with a finger in a sand pit. Students, one by one, repeat the same.

Step 2. You could ask the students to draw straight, curved and wavy lines alternately to familiarise them with the different forms of lines.

Step 3. Now, trace a wavy line in the air with a finger and ask the students to do the same. Ask them to trace wavy lines on different surfaces such as the floor, the tabletop, the window, and so on.

Activity 2

Repeat Activity 2 of the previous lesson. The student is required to correctly identify the type of line.

Textbook Practice Pages

Page 15 (20 min)

Step 1. Explain that they will now learn to draw a wavy line on the page.

Step 2. Help the students identify the objects shown on the page. You may also ask them to act out how these objects are used. You can perform a wavy action in the air as the movement of the fish.

Step 3. Explain that the outline of the movement of the fish can be drawn by joining the dots with a pencil.

Step 4. Select one of the fish and trace along the dotted lines with your finger.

Step 5. Now, join the dots with a pencil.

Step 6. Ask the students to trace the dotted lines on the page.

➢ Spiral Lines

Whole Class Activity (10 min)

Take the students outside and see if they can identify spiral patterns in the environment.

Small Group Activity (10 min)

Give play dough to the students to make spiral lines.

Individual Activity (10 min)

Give slates and chalk to the students to make/ trace spiral lines.

Let the students trace spiral lines on a laminated template (similar to the ones given on page 15) with board markers.

Lesson 6: Spiral Lines

Objective

By the end of this lesson, the students should be able to draw spiral lines.

Learning Curve

The students have developed skills in drawing curved and wavy lines with a pencil. They will now learn how to draw spiral lines.

Learning Resources

Sandpit and pencils

Learning Activity (10 min)

Activity 1

Step 1. Introduce spiral lines by tracing one with a finger in a sandpit. Students, one by one, repeat the same.

Step 2. You could ask the students to draw curved wavy lines alternately to familiarise them with the different forms of lines.

Step 3. Now, trace a spiral line in the air with a finger and ask the students to do the same. Ask them to trace spiral lines on different surfaces such as the floor, the tabletop, the window, and so on.

Activity 2

Repeat Activity 2 of the previous lesson. The student is required to correctly identify the type of line.

Textbook Practice Pages

Page 15 (10 min)

Step 1. Explain that they will now learn to draw a spiral line on the page.

Step 2. Point to the bee and explain what it is. Next explain that the bee is flying making a spiral pattern.

Step 3. Trace your finger along the dotted spiral line and explain that this is the path the bee would follow.

Step 4. Ask the students to follow the dotted line with a finger.

Step 5. Draw a spiral line with a pencil by joining the dots.

Step 6. Ask the students to trace the dotted lines on the page.

Step 7. Repeat steps 1- 6 with the aeroplane exercise.

Lesson 7: Practice of all Lines

Objective

By the end of this lesson, the students should be able to draw straight horizontal and vertical lines, zigzag, and curved lines.

Learning Curve

The students have developed skills in drawing all types of lines with a pencil. They will now learn how to draw different lines to complete a shape.

Learning Resources

Pencils

Learning Activity (40 min)

Textbook Practice Pages

Page 16

Step 1. Help the students identify the objects shown on the page. You may also ask them how these objects are used.

Step 2. Explain that the outlines of these objects can be drawn by joining the dots with a pencil.

Step 3. Select one of the objects and trace along the dotted lines with your finger.

Step 4. Now, ask the students to join the dots with a pencil.

Step 5. Repeat steps 3 and 4 with all the objects on the page.

Step 6. Ask the students to colour the objects.

4 Numbers: Part One

It is essential to point out to the students the fact that numbers exist in nature. For example:

1 Sun, 1 Moon, 1 nose, 1 tongue, etc.

2 eyes, 2 ears, 2 legs of a bird, etc.

3 petals on spider wort flower, etc.

4 legs of a dog, 4 wings of a butterfly, etc.

5 fingers on a human hand, 5 legs of a starfish, etc.

➢ **Number 1**

Whole Class Activity (5 min)

Circle Time — ask students to bring one object from the basket or classroom, e.g. bring one crayon, one pencil, one notebook etc.

Small Group Activity/ Individual Activity (10 min)

- Make hollow 1 on chart paper (12″ × 8″). Let students take turns to trace the number with their finger, dipped in paint, using a different colour each time. Do this activity in three to four groups, depending on the number of students. Display these charts in the class.
- Provide play dough to make 1 ball/ 1 orange/ 1 snake etc.

Lesson 1: Number 1

Objective

By the end of this lesson, the students should be able to recognise the number 1.

Learning Curve

The students should learn numbers 1 - 5 at this level before they learn addition and subtraction in later years.

Learning Resources

Various objects including toys, flowers, books, etc.

Learning Activity (30 min)

Using page 17 of the textbook.

Step 1. Point to the picture of the girl. Ask what the girl is holding. They should reply with 'flower' or 'balloon'.

Step 2. Ask the students how many flowers or balloons there are. Since the students may not know the answer, you should say 'one flower' while pointing to the picture. Similarly, say 'one balloon' while pointing to the picture.

Step 3. Hold up one finger as shown on page 17 and say 'one . Ask the students to do the same. Repeat this several times until the students become fluent.

Step 4. Now point to number 1 and call out 'one'. Ask the students to repeat this after you. Trace the number 1 in the air with a finger. The students should be asked to do the same. Repeat this several times until the students are confident.

Wrap up Activity (10 min)

You can initiate an activity where you call out a student and ask them to fetch you 'one block' from the toy shelf. Thank them when they do so. Continue to do this with all the students by asking them to fetch 'one flower', 'one doll', 'one cup', and so on. Arrange these objects in a corner and stick a sheet of paper on the wall above them. Write the number 1 on the sheet. This is now the '1 corner' of the classroom.

Lesson 2: Number 1

Objective

By the end of this lesson, the students should be able to identify one object.

Learning Curve

The students should learn numbers 1-5 at this level before they learn addition and subtraction in later years. It is important for students to learn to identify the number 1 in nature, e.g. 1 Sun, 1 Moon, 1 nose, etc. They can identify 1 fan, 1 board, 1 teacher's desk, etc in the classroom also.

Learning Resources

Various objects including toys, flowers, books, etc.

Textbook Practice Pages

Page 18 (20 min)

Step 1. Ask the students to look at the first pair of apples. Ask them to select one apple of the two.

Step 2. Ask the students to trace a circle around the apple with a finger.

Step 3. Next, ask the students to draw a circle around the apple with a pencil.

Step 4. Repeat steps 1 to 3 with the other fruit pairs.

Step 5. Ask the students to identify the fruits in the basket and colour them.

Page 19 (20 min)

Step 1. Ask the students to look at the first row on the page. Ask them to identify the objects. Next, ask them which object is one. They should answer, 'one ball'.

Step 2. Tell the students to put a tick on the ball.

Step 3. Repeat steps 1 and 2 for the remaining rows on the page.

Lesson 3: Number 1

Objective

By the end of this lesson, the students should be able to read and write the number 1.

Learning Curve

The students should learn numbers 1-5 at this level before they learn addition and subtraction in later years. It is important for students to learn to identify the number 1 in nature, e.g. 1 flower, 1 tree, 1 dog, etc. They can identify 1 pencil, 1 chair, 1 book, etc. in the classroom.

Learning Resources

Various objects including toys, flowers, books, etc.

Textbook Practice Pages

Page 20 (20 min)

Step 1. Ask the students how many balls on the page.

Step 2. Ask them to trace the number one in the air with a finger. Next, ask them to trace it with their finger on the page following the dotted line and the arrow.

Step 3. Once the students are familiar with the formation, ask them to use a pencil to trace the number one across the row.

Step 4. Repeat steps 1 and 2 for the remaining numbers on the page.

Page 21 (20 min)

Step 1. Ask the students to look at the first row on the page. Ask them to identify the object in the first row. Next, ask them how many flowers. They should answer, 'one flower'.

Step 2. Ask them to trace the number one in the air with a finger. Next, ask them to trace it with their finger on the page following the dotted line and the arrow.

Step 3. Once the students are familiar with the formation, ask them to use a pencil to trace the number one across the row.

Step 4. Repeat steps 1 to 3 for the remaining rows on the page.

➢ **Number 2**

Whole Class Activity (5 min)

Circle time — The teacher will ask the students to count any one part of the face; saying I have one nose/ one mouth/ one face. And then two parts; saying I have two eyes/ two ears/ two cheeks.

Small Group Activity (10 min)

Put some small objects in a feely bag e.g. buttons, counters, erasers, etc. Ask students to take out 1 or 2 objects from the bag. Make sure every student takes a turn.

Individual Activity (10 min)

Prepare 3 to 4 laminated templates of hollow '2' (refer to page number 22). Let the students use markers to trace the number.

Lesson 1: Number 2

Objective

By the end of this lesson, the students should be able to recognise the number 2.

Learning Curve

The students should learn numbers 1-5 at this level before they learn addition and subtraction in later years.

Learning Resources

Various objects including toys, flowers, books, etc.

Learning Activity (30 min)

The learning activity on page 22 of the textbook can be carried out by following the approach adopted for the number 1.

Wrap up Activity (10 min)

You can initiate an activity where you call out a student and ask them to fetch you 'two blocks' from the toy shelf. Thank them when they do so. Continue to do this with all the students by asking them to fetch 'two flowers', 'two dolls', 'two cups', and so on. Arrange these objects in a corner and stick a sheet of paper on the wall above them. Write the number 2 on the sheet. This is now the '2 corner' of the classroom.

Lesson 2: Number 2

Objective

By the end of this lesson, the students should be able to identify two objects.

Learning Curve

The students should learn numbers 1-5 at this level before they learn addition and subtraction in later years. Students should learn that the word 'pair' indicates a set of two.

Learning Resources

Various objects including toys, flowers, books, etc.

Textbook Practice Pages

Page 23 (20 min)

Step 1. Ask the students to identify and count the objects.

Step 2. Read out the first question and ask the students to count two balloons. Then ask them to colour them in the required colour. They should then colour the remaining balloon green.

Step 3. Ask the students colour the flowers in the same way.

Page 24 (20 min)

The exercise on page 24 of the textbook can be carried out by following the approach adopted for page 19.

Lesson 3: Number 2

Objective

By the end of this lesson, the students should be able to read and write the number 2.

Learning Curve

The students should learn numbers 1-5 at this level before they learn addition and subtraction in later years. It is important for students to learn to identify the number 2 in nature, e.g. 2 hands, 2 eyes, 2 ears, etc. They can identify 2 pencils, 2 chairs, 2 books, etc. in the classroom.

Learning Resources

Various objects including toys, flowers, books, etc.

Textbook Practice Pages

Page 25 (20 min)

Step 1. Ask the students how many birds on the page.

Step 2. Ask them to trace the number two in the air with a finger. Next, ask them to trace it with their finger on the page following the dotted line and the arrow.

Step 3. Once the students are familiar with the formation, ask them to use a pencil to trace the number two across the row.

Step 4 Repeat steps 1 and 2 for the remaining numbers on the page.

Page 26 (20 min)

The exercise on page 26 of the textbook can be carried out by following the approach adopted for page 21.

➢ Number 3

Whole Class Activity (10 min)

Number Hunt: Prepare 4 to 5 flash cards (5″ × 5″) with any three objects on them. For example, 3 bears, 3 balls, 3 dolls, 3 pencils etc. along with the number 3 written on them. Hide these cards in different places in the classroom. During circle time, send a group of 4 to 5 students to find the cards. Once they find one card, count the pictures on the card with the students and point towards the number and saying ‘3’. Repeat the same step with other groups as well.



Small Group Activity (10 min)

Write numbers 1, 2 and 3 on the floor with chalk. Give instructions and let students take turns to jump on the number 1, stand on the number 2, touch the number 3 etc.

Individual Activity (10 min)

Make hollow number ‘3’ on paper. Let students trace the number with crayons at least 3 times, using different colour each time.

Lesson 1: Number 3

Objective

By the end of this lesson, the students should be able to recognise the number 3.

Learning Curve

The students should learn numbers 1-5 at this level before they learn addition and subtraction in later years.

Learning Resources

Various objects including toys, flowers, books, etc.

Learning Activity (30 min)

The learning activity on **page 27** of the textbook can be carried out by following the approach adopted for the number 1.

Wrap up Activity (10 min)

You can initiate an activity where you call out a student and ask them to fetch you ‘three blocks’ from the toy shelf. Thank them when they do so. Continue to do this with all the students by asking them to fetch ‘three flowers’, ‘three dolls’, ‘three cups’, and so on. Arrange these objects in a corner and stick a sheet of paper on the wall above them. Write the number 3 on the sheet. This is now the ‘3 corner’ of the classroom.

Lesson 2: Number 3

Objective

By the end of this lesson, the students should be able to identify three objects.

Learning Curve

The students should learn numbers 1-5 at this level before they learn addition and subtraction in later years.

Learning Resources

Various objects including toys, flowers, books, etc.

Textbook Practice Pages

Page 28 (20 min)

The exercise on page 28 of the textbook can be carried out by following the approach adopted on page 19.

Page 29 (20 min)

Step 1. Ask the students to look at the picture of the table and identify some of the objects that are familiar to them.

Step 2. Read out the question and ask the students to identify the required number of objects.

Step 3. Ask the students to colour the objects in the required colours.

Lesson 3: Number 3

Objective

By the end of this lesson, the students should be able to read and write the number 3.

Learning Curve

The students should learn numbers 1-5 at this level before they learn addition and subtraction in later years.

Learning Resources

Various objects including toys, flowers, books, etc.

Textbook Practice Pages

Page 30 (20 min)

Step 1. Ask the students how many trees on the page.

Step 2. Ask them to trace the number three in the air with a finger. Next, ask them to trace it with their finger on the page following the dotted line and the arrow.

Step 3. Once the students are familiar with the formation, ask them to use a pencil to trace the number three across the row.

Step 4. Repeat steps 1 and 2 for the remaining numbers on the page.

Page 31 (20 min)

The exercise on page 31 of the textbook can be carried out by following the approach adopted for page 26.

➢ Number 4

Whole Class Activity (10 min)

Number Hunt: Prepare 4 to 5 flash cards with any 4 objects on them (as prepared for number 3). For example, 4 bears, 4 balls, 4 dolls, 4 pencils etc. along with number 4 written on them. Hide these cards in different places in the classroom. During circle time, send a group of 4 to 5 students to find out the cards of number 4. Once they find one card, count the pictures on the card with the students and point towards the number saying '4'. Repeat the same step with other groups as well.

Small Group Activity (10 min)

Provide students with disposable glasses. Label each glass with a number from 1 to 4. Also provide 10 counters/ beads to them. Ask them to put in counters/ beads in the glasses according to the number written on the glass.

Note: Same activity can be done for all other numbers.

Individual Activity: (10 Minutes)

Provide play dough to the students and ask them to make any 4 objects of their choice.

Lesson 1: Number 4

Objective

By the end of this lesson, the students should be able to recognise the number 4.

Learning Curve

The students should learn numbers 1-5 at this level before they learn addition and subtraction in later years.

Learning Resources

Various objects including toys, flowers, books, etc.

Learning Activity (30 min)

The learning activity on **page 32** of the textbook can be carried out by following the approach adopted for the number 1.

Wrap up Activity (10 min)

You can initiate an activity where you call out a student and ask them to fetch you 'four blocks' from the toy shelf. Thank them when they do so. Continue to do this with all the students by asking them to fetch '4 flowers', '4 dolls', '4 cups', and so on. Arrange these objects in a corner and stick a sheet of paper on the wall above them. Write the number 4 on the sheet. This is now the '4 corner' of the classroom.

Lesson 2: Number 4

Objective

By the end of this lesson, the students should be able to identify four objects.

Learning Curve

The students should learn numbers 1-5 at this level before they learn addition and subtraction in later years.

Learning Resources

Various objects including toys, flowers, books, etc.

Textbook Practice Pages

Page 33 and 34 (20 min)

The exercise on page 33 of the textbook can be carried out by following the approach adopted on pages 19, 24, and 28.

Note: Students should learn to recognise numbers in nature. A visit to the zoo provides opportunities to learn about animals with 4 legs. For example. lion, deer, elephant, etc.

Lesson 3: Number 4

Objective

By the end of this lesson, the students should be able to read and write the number 4.

Learning Curve

The students should learn numbers 1-5 at this level before they learn addition and subtraction in later years.

Learning Resources

Various objects including toys, flowers, books, etc.

Textbook Practice Pages

Page 35 (20 min)

Step 1. Ask the students how many hats on the page.

Step 2. Ask them to trace the number four in the air with a finger. Next, ask them to trace it with their finger on the page following the dotted line and the arrow.

Step 3. Once the students are familiar with the formation, ask them to use a pencil to trace the number four across the row.

Step 4. Repeat steps 1 and 2 for the remaining numbers on the page.

Page 36 (20 min)

The exercise on page 36 of the textbook can be carried out by following the approach adopted for pages 21, 26, and 31.

➢ **Number 5**

Whole Class Activity (5 min)

Show students random number cards from 1 to 5 during circle time and ask them to show the fingers of their hands according to the shown number.

Small Group Activity (10 min)

Heart Puzzle: Cut 5 hearts of approximately 6″ × 6″ from a red card sheet. Cut each heart in half using a zigzag pattern. Write a number on one side of the heart and draw a corresponding number of hearts on the other side of the heart. Now let the students find matching parts of the broken hearts.

Individual Activity (10 min)

Let each student print his/ her hand span on a sheet of paper and count the fingers.

Lesson 1: Number 5

Objective

By the end of this lesson, the students should be able to recognise the number 5.

Learning Curve

The students should learn numbers 1-5 at this level before they learn addition and subtraction in later years.

Learning Resources

Various objects including toys, flowers, books, etc.

Learning Activity (30 min)

The learning activity on page 37 of the textbook can be carried out by following the approach adopted for the number 1.

Wrap up Activity (10 min)

You can initiate an activity where you call out a student and ask them to fetch you 'five blocks' from the toy shelf. Thank them when they do so. Continue to do this with all the students by asking them to fetch 'five flowers', 'five dolls', 'five cups', and so on. Arrange these objects in a corner and stick a sheet of paper on the wall above them. Write the number 5 on the sheet. This is now the '5 corner' of the classroom.

Lesson 2: Number 5

Objective

By the end of this lesson, the students should be able to identify five objects.

Learning Curve

The students should learn numbers 1-5 at this level before they learn addition and subtraction in later years.

Learning Resources

Various objects including toys, flowers, books, etc.

Textbook Practice Pages

Page 38 (20 min)

Step 1. Read out the question.

Step 2. Ask the students to count the cupcakes in each set. When they identify five cupcakes in a set, ask them to trace a circle around it with a finger.

Step 3. Next, ask them to draw a circle with a pencil.

Step 4. Ask the students to colour the cupcakes in different colours.

Note: Once again, help students look for 5 in nature, e.g. 5 petals in a flower, 5 fingers, 5 toes, etc.

Page 39 (20 min)

The textbook exercise on page 39 of the textbook can be carried out by following the approach adopted for pages 19, 24, and 28.

Lesson 3: Number 5

Objective

By the end of this lesson, the students should be able to read and write the number 5.

Learning Curve

The students should learn numbers 1-5 at this level before they learn addition and subtraction in later years.

Learning Resources

Various objects including toys, flowers, books, etc.

Textbook Practice Pages

Page 40 (20 min)

Step 1. Ask the students how many dice on the page.

Step 2. Ask them to trace the number five in the air with a finger. Next, ask them to trace it with their finger on the page following the dotted line and the arrow.

Step 3. Once the students are familiar with the formation, ask them to use a pencil to trace the number five across the row.

Step 4. Repeat steps 1 and 2 for the remaining numbers on the page.

Page 41 (20 min)

The exercise on page 41 of the textbook can be carried out by following the approach adopted for pages 21, 26, 31, and 36.

5 Shapes: Part One

Suggested Activities

➢ **Cube**

Whole Class Activity (10 min)

Activity 1: Bring 3D objects like storage boxes shaped like cubes and cuboids, football (sphere), juice cans (cylinder) or different fruits such as oranges (sphere), watermelons (oval), etc. You can ask the students to count and say how many spherical or oval shapes there are on the table, how many cubes, and so on. You could cut the watermelon into cube, cuboid, cone and cylindrical shapes and distribute them to the students.

Activity 2: Objects of various shapes can be arranged on the teacher's desk, e.g. spherical objects (a ball, a marble, and a football), ovoid objects (an egg, a rugby ball, and a watermelon), conical objects (an ice-cream cone and a clown's hat), and cube-shaped objects (a sugar cube and a dice). The students can be asked to come to the desk and identify objects with the same shape.

Activity 3: *Circle Time* — Take a wooden cube/ block and show it to the students. Keep the cube in your hand, close your eyes and feel the cube by moving your fingers all around its sides. Repeat the same procedure with open eyes. Pass on the cube to the students one by one and let them feel it in the similar way. Each time a student feels the cube, let him/ her repeat the name of the shape 'cube'.

Small Group Activity (10 min)

Dice Game — A student will roll the dice. The number of the dots on the top of the dice will be counted by all students in the group and then the student who had rolled the dice will jump/ clap etc. that many times. Repeat the steps with all other students of the group. Emphasise the shape of the dice.

Individual Activity (5 min)

Prepare a ***feely bag*** with a few miniature objects in it along with a cube/ dice. Let the student find the cube by feeling it.

Lesson 1: Cube

Objective

By the end of this lesson, the students should be able to identify and trace a cube.

Learning Curve

Students are very likely to come across three-dimensional objects in their environment. Therefore, they can be introduced to 3D shapes such as cubes prior to 2D shapes.

Learning Resources

Various toys and objects shaped like cubes.

Learning Activity

Activity 1 (10 min)

Step 1. Arrange the various cube-shaped objects in the work area and encourage the students to explore them.

Step 2. Encourage them to feel the faces, edges, and corners of the objects. Explain that all these objects are cube-shaped.

Step 3. Hold up each object and call out the word 'cube' while moving your hand across the faces, edges, and corners. Ask the students to do the same.

Whole class **activity 2** can be done to familarise students with cube.

Textbook Practice Pages

Page 47 (10 min)

Step 1. Ask the students to look at the objects on the page. Ask them to identify the objects shaped like a cube.

Step 2. Trace the cube by moving your finger along the dotted lines. Ask the students to do the same.

Step 3. Ask the students to draw and colour the shape.

➢ **Sphere**

Whole Class Activity (10 min)

Take the students out of the classroom and let them play with a ball. Talk about the shape of the ball i.e. sphere.

Small Group Activity (10 min)

Shape Hunt — Prepare the classroom with sphere shaped objects hidden in different places. For example, different sizes of balls, oranges, globe, plums, round beads etc. Let the group take a basket and hunt the sphere-shaped objects in the classroom.

Individual Activity (10 min)

Provide play dough to the students and let them make spheres.

Lesson 2: Sphere

Objective

By the end of this lesson, the students should be able to identify and trace a sphere.

Learning Curve

Students are very likely to come across three-dimensional objects in their environment. Therefore, they can be introduced to 3D shapes such as cubes prior to 2D shapes.

Learning Resources

Various toys and objects shaped like spheres.

Learning Activity

Activity 1 (20 min)

Step 1. Arrange the various spherical-shaped objects in the work area and encourage the students to explore them.

Step 2. Encourage them to feel the curved surface all around the objects. Explain that all these objects are spherical-shaped.

Step 3. Hold up each object and call out the word 'sphere' while moving your hand across the curved surface. Ask the students to do the same.

Repeat whole class **activity 2** for spherical objects.

Textbook Practice Pages

Page 47 (20 min)

Step 1. Ask the students to look at the objects on the page. Ask them to identify the objects shaped like a sphere.

Step 2. Trace the cube by moving your finger along the dotted lines. Ask the students to do the same.

Step 3. Ask the students to draw and colour the shapes.

➢ **Cone**

Whole Class Activity (30 min)

Cone Party — Provide cone shaped birthday hats to the students and have a party. Arrange different games and let them have fun.

Small Group Activity (10 min)

Shape Hunt — Prepare the classroom with cone shaped objects hidden in different places. For example, party hats, toy ice cone, funnel, cone shaped shell, play dough cone etc. Let the group take a basket and hunt the cone-shaped objects from the classroom.

Individual Activity (10 min)

Provide play dough to the students and let them make cones.

Lesson 3: Cone

Objective

By the end of this lesson, the students should be able to identify and trace a cone.

Learning Curve

Since the students are familiar with cubes and spheres, therefore, cones can be introduced.

Learning Resources

Various toys and objects shaped like cones.

Learning Activity

Activity 1 (10 min)

Step 1. Arrange the various conical objects in the work area and encourage the students to explore them.

Step 2. Encourage them to feel the faces and edge of the objects. Explain that all these objects have a conical shape.

Step 3. Hold up each object and call out the word 'cone' while moving your hand across the faces and the edge. Ask the students to do the same.

Repeat whole class **activity 2** for conical objects.

Textbook Practice Pages

Page 48 (20 min)

Step 1. Ask the students to look at the objects on the page. Ask them to identify the objects shaped like a cone

Step 2. Trace the cone by moving your finger along the dotted lines. Ask the students to do the same.

Step 3. Ask the students to draw and colour the shapes.

6 Patterns

Suggested Activities

Whole Class Activity (10 min)

Circle Time: Use small coloured blocks to make a simple pattern, such as; one red block, one blue block, one red block, etc. Ask the students to tell you what colour of block would go next in your pattern. Repeat the steps to make different patterns.

Small Group Activity (10 min)

Provide different blocks/ beads to the students and ask them to create their own patterns.

Individual Activity (10 min)

Provide laminated templates (similar to the ones given on page 49 & 50) to the students to complete the patterns.

Lesson 1: Patterns

Objective

By the end of this lesson, the students should be able to recognise and complete patterns.

Learning Curve

Since the students are familiar with some colours and shapes, they should move on to identifying patterns based on recurring colours and shapes.

Learning Resources

Identical objects such as water bottles of the same size, building blocks of the same colour and shape, etc.

Learning Activity (20 min)

Step 1. Place the objects in the centre of the work area.

Step 2. Pick out an object at random and call out its name, e.g. 'bottle'. Ask the students to repeat the name. Place the object in front of you on the work area.

Step 3. Pick out another object and call out its name, e.g. 'red block'. Ask the students to repeat the name. Place the object next to the first object.

Step 4. Repeat steps 2 and 3 to form a chain. Choose the same objects you did in steps 2 and 3. As you do, continue repeating the names of the objects in the pattern, e.g. 'bottle, red block, bottle, red block'.

Step 5. Stop at regular intervals and ask the students which object should come next in the pattern. Pick out the correct object and continue the series.

Textbook Practice Pages

Page 49 (10 min)

Step 1. Ask the students to look at the objects on the page. Select the first series and identify the objects. Call them out clearly, 'ball, butterfly, ball, butterfly, ball, butterfly'.

Step 2. Repeat step 1 with the next two series.

Step 3. Now, call out the series at the bottom of the page, 'blue cylinder, red square, blue cylinder, red square'. As you approach the blank box, ask the students which shape should follow.

Step 4. When the students give the correct answer, i.e. red square, ask them to point to it in the next line. Ask them to draw the object in the blank box.

Lesson 2: Patterns

Objective

By the end of this lesson, the students should be able to recognise and complete patterns.

Learning Curve

The students should continue with the practice of recognising and completing patterns.

Textbook Practice Pages

Page 50 (30 min)

Step 1. Ask the students to study the first series. Ask them to note which way the shape points.

Step 2. When the students come to the blank space, ask them what should go in the blank space. Which way should it point?

Step 3. When the students call out the correct answer, ask them to draw the shape in the air. Next, ask them to draw it in the space with a pencil.

Step 4. Ask them to identify which colour the object should be. Help them choose the correct colour crayon or pencil and colour the shape on the page.

Step 5. Repeat steps 1 to 4 with the remaining patterns on the page.

Wrap up Activity (10 min)

Carry out a verbal activity by asking one student to call out a colour, say blue, and another student to call out another colour, say red. The other students should continue with the same series, i.e. blue, red, blue, red, and so on. You can select students at random or in a series depending on what raises the interest level of the students.

7 Numbers: Part Two

Suggested Activities

➢ **Number 6**

Whole Class Activity (10 min)

Make a washing line in the class and prepare number cards from 1 to 6. Ask the students which number comes first, then peg number 1 on the washing line in front of them. Then ask them which number comes after 1. After their reply, peg number 2 in front of them. Similarly peg all numbers up till 6.

Small Group Activity/ Individual Activity (10 min)

- Let the students practice pegging the numbers in sequence from 1 to 6 on the washing line.

Note: The same activity can be done for all other numbers.

- Give laminated templates of hollow number 6 (refer to page 52) to the students and let them trace the number using a board marker.

Lesson 1: Number 6

Objective

By the end of this lesson, the students should be able to recognise the number 6.

Learning Curve

The students should learn numbers 6-9 at this level before they learn addition and subtraction in later years.

Learning Resources

Various objects including toys, flowers, books, etc.

Learning Activity (30 min)

The learning activity on page 51 of the textbook can be carried out by following the approach adopted for the number 1.

Wrap up Activity (10 min)

You can initiate an activity where you call out a student and ask them to fetch you 'six blocks' from the toy shelf. Thank them when they do so. Continue to do this with all the students by asking them to fetch 'six flowers', 'six dolls', 'six cups', and so on. Arrange these objects in a corner and stick a sheet of paper on the wall above them. Write the number 6 on the sheet. This is now the '6 corner' of the classroom.

Lesson 2: Number 6

Objective

By the end of this lesson, the students should be able to recognise and write the number 6.

Learning Curve

The students should learn numbers 6-9 at this level before they learn addition and subtraction in later years.

Learning Resources

Various objects including toys, flowers, books, etc.

Textbook Practice Pages

Page 52 and 53 (20 min)

The exercise on pages 52 and 53 of the textbook can be carried out by following the approach adopted for numbers 1-5.

Page 54 (20 min)

Step 1. Read out the question.

Step 2. Ask the students to count the petals on each flower. Ask them to colour the flowers with 6 petals blue and flowers with 5 petals yellow.

Step 3. Next, ask them to write the number in the box next to each flower.

➢ Number 7

Whole Class Activity (10 min)

Make a washing line in the class and prepare number cards from 1 to 7. Ask the students that which number comes first, then peg number 1 on the washing line in front of them. Then ask them which number comes after 1. After their reply, peg number 2 in front of them. Similarly peg all numbers up till 7.

Small Group Activity (10 min)

Prepare small number cards from 1-7 and put them in a basket along with pegs. Give the basket to the students and ask them to peg the cards according to the numbers.

The same activity can be done for all other numbers.

Individual Activity (10 min)

Provide play dough to make different objects of number 7.

Lesson 1: Number 7

Objective

By the end of this lesson, the students should be able to recognise the number 7.

Learning Curve

The students should learn numbers 6-9 at this level before they learn addition and subtraction in later years.

Learning Resources

Various objects including toys, flowers, books, etc.

Learning Activity (30 min)

The learning activity on page 55 of the textbook can be carried out by following the approach adopted for the number 1.

Wrap up Activity (10 min)

You can initiate an activity where you call out a student and ask them to fetch you 'seven blocks' from the toy shelf. Thank them when they do so. Continue to do this with all the students by asking them to fetch 'seven flowers', 'seven dolls', 'seven cups', and so on. Arrange these objects in a corner and stick a sheet of paper on the wall above them. Write the number 7 on the sheet. This is now the '7 corner' of the classroom.

Lesson 2: Number 7

Objective

By the end of this lesson, the students should be able to recognise and write the number 7.

Learning Curve

The students should learn numbers 6-9 at this level before they learn addition and subtraction in later years.

Learning Resources

Various objects including toys, flowers, books, etc.

Textbook Practice Pages (40)

Page 56 and 57 (20 min)

The exercise on page 56 and 57 of the textbook can be carried out by following the approach adopted for number 1.

Page 58 (20 min)

Step 1. Read out the question.

Step 2. Ask the students to count the hens and write the number in the box.

Step 3. Ask the students to count the pigeons and write the number in the box.

➢ Number 8

Whole Class Activity: (10 min)

Draw a huge 8 using chalk in the playground. Make sure to draw arrows following the correct formation of number 8 (refer to page 60 for the formation of number 8). Ask each student to follow the arrows forming an 8.

Small Group Activity (10 min)

Send students on a number hunt. Give them random number flashcards (1-8) and ask them to bring objects from the classroom according to the number. (Send them in groups of fours.)

Individual Activity: (10 min)

Give laminated templates of hollow number 8 to the students and let them trace the number using a board marker.

Lesson 1: Number 8

Objective

By the end of this lesson, the students should be able to recognise the number 8.

Learning Curve

The students should learn numbers 6-9 at this level before they learn addition and subtraction in later years.

Learning Resources

Various objects including toys, flowers, books, etc.

Learning Activity (30 min)

The learning activity on page 59 of the textbook can be carried out by following the approach adopted for the number 1.

Wrap up Activity (10 min)

You can initiate an activity where you call out a student and ask them to fetch you ‘eight blocks’ from the toy shelf. Thank them when they do so. Continue to do this with all the students by asking them to fetch ‘eight flowers’, ‘eight dolls’, ‘eight cups’, and so on. Arrange these objects in a corner and stick a sheet of paper on the wall above them. Write the number 8 on the sheet. This is now the ‘8 corner’ of the classroom.

Lesson 2: Number 8

Objective

By the end of this lesson, the students should be able to recognise and write the number 8.

Learning Curve

The students should learn numbers 6-9 at this level before they learn addition and subtraction in later years.

Learning Resources

Various objects including toys, flowers, books, etc.

Textbook Practice Pages

Page 60 and 61 (20 min)

The exercise on page 60 and 61of the textbook can be carried out by following the approach adopted for lesson 1.

Page 62 and 63 (20 min)

Step 1. Ask the students to study the picture of Hamid and Alia.

Step 2. Read out the question on page 63.

Step 3. Ask the students to identify the yellow circles in the picture. Then ask them to count the yellow circles and write the number in the blank box.

Step 4. In a similar way, help the students answer all the questions on the page.

➢ **Number 9**

Whole Class Activity (10 min)

Matching Activity: Divide students in two groups. Provide the number cards from 1 to 9 to the students of one group (give any 1 card to each student). Provide the quantity cards from 1 to 9 to the other group (give any 1 card to each student). Call number 1 from the number cards' group and let the student find his/ her quantity partner from quantity cards' group. Once both the students are found, let them stand together and repeat the same procedure with number 2 and so on. Recall all numbers from 1 to 9.

Small Group Activity (10 min)

Hopscotch: Prepare a hopscotch grid with chalk in the playgroung with numbers 1 to 9 written on it. Call out the name of any student and ask him/ her to hop on any number e.g 4, 2, 9 etc. Give chance to all students.

Individual Activity (10 min)

Necklace Making: Give multi coloured raw ring crackers (9) to each student along with a small piece of string. Let them make colourful necklaces of 9 crackers for their mothers and sisters.

Lesson 1: Number 9

Objective

By the end of this lesson, the students should be able to recognise the number 9.

Learning Curve

The students should learn numbers 6 - 9 at this level before they learn addition and subtraction in later years.

Learning Resources

Various objects including toys, flowers, books, etc.

Learning Activity (30 min)

The learning activity on page 64 of the textbook can be carried out by following the approach adopted for the number 1.

Wrap up Activity (10 min)

You can initiate an activity where you call out a student and ask them to fetch you 'nine blocks' from the toy shelf. Thank them when they do so. Continue to do this with all the students by asking them to fetch 'nine flowers', 'nine dolls', 'nine cups', and so on. Arrange these objects in a corner and stick a sheet of paper on the wall above them. Write the number 9 on the sheet. This is now the '9 corner' of the classroom.

Lesson 2: Number 9

Objective

By the end of this lesson, the students should be able to recognise and write the number 9.

Learning Curve

The students should learn numbers 6-9 at this level before they learn addition and subtraction in later years.

Learning Resources

Various objects including toys, flowers, books, etc.

Textbook Practice Pages

Page 65 and 66 (20 min)

The exercise on page 65 and 66 of the textbook can be carried out by following the approach adopted for previous lessons.

Pages 67 (10 min)

Step 1. Read out the question on the page.

Step 2. Explain that they are required to look at the given number carefully and draw exactly same number of dots in the box.

Step 3. Keep on identifying the number and drawing dots of the same quantity until the exercise is complete.

Pages 68 (10 min)

Step 1. Ask the students to study the pictures on the page.

Step 2. Read out the question on the page read aloud the list of objects given.

Step 3. Explain that they are required to count the objects given on the page, and draw a circle as specified in the box. Use the example of two shampoo bottles that has been solved on the page.

Step 4. Similarly, count out and circle all the objects until the exercise is complete.

➢ Concept of 'Zero'

Whole Class Activity (10 min)

Circle Time — Take a poster sheet, divide it in to 10 squares and write numbers from 0-9 on it. Take 45 beads/ counters in a basket. Point towards number 1 and ask students which number is this? Once they answer, ask them that how many beads/ counters will go with number 1? Take out 1 bead/ counters from the basket and put it on number 1. Repeat the same procedure with all numbers up till 9, leaving the 0 aside.

Once you are done with all the numbers, show them the empty basket and tell them that all the beads/ counters are finished. Then point towards number 0 and make them realise that you have not put any counter on it and there is no counter left in the basket. Tell them that we don't place any bead/ counter as '0' as 0 means nothing. Repeat this sentence many times with the students. Then ask them to clap 3 times, 7 times, 2 times and then 0 times, again emphasising that we don't need to clap on 0, as 0 means nothing. Do a few more actions like jumping, snapping fingers etc. to further reinforce the concept.

Small Group Activity (10 min)

Let them practice placing the quantity on the numbers that was used during the circle time to introduce the concept of 0.

Individual Activity (10 min)

Give papers and crayons to the students and let them write 0.

Lesson 1: Concept of 'zero'

Objective

By the end of this lesson, the students should be able to recognise and write the number 0.

Learning Curve

The concept of zero should be introduced at this stage so that the students can learn to count to 10 and beyond.

Learning Resources

Various objects and a container such as a box or bin

Learning Activity (20 min)

Step 1. Hold up a box of toys so that the students can clearly see the contents. Ask them how many toys it contains. The students should count the correct number and say it out loud.

Step 2. Now take the toys out one by one and each time ask the students to count the number of toys remaining.

Step 3. When there are no more toys in the box, ask how many toys there are. If they cannot answer, explain that there are no toys, or 'zero' toys in the box.

Step 4. Use similar examples such as the number of books in a bag or the number of flowers in a vase to reinforce the concept of zero.

Textbook Practice Pages

Pages 69 (10 min)

Step 1. Ask the students to count the cats in the box in the first picture. Then, ask them to count the cats in the second box.

Step 2. Ask them what number is used to refer to such a situation. Ask the students to trace the zero figure shown in the box.

Step 3. Similarly, explain the concept of zero again using the example of the birds in the cage.

Pages 70 (10 min)

Step 1. Ask the students to count the flowers and write the correct answer in the box.

Step 2. Read the question, and ask the students to identify which basket has no fruit in it.

Step 3. Repeat the question for the fish bowl.

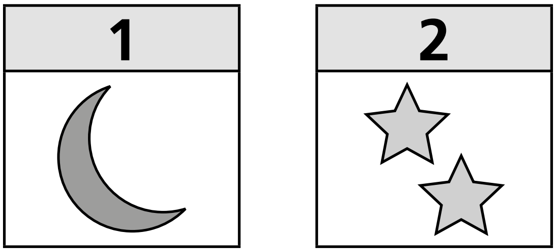
➢ Number 10

Whole Class Activity (10 min)

Hide the number cards from 1 to 10 in the school play area. Reinforce numbers from 1 to 10 with a washing line in the class and then take the students to the garden area. Ask the students to find the numbers. Once they find the numbers from 1-10 ask them to arrange the numbers from 1 to 10 on the floor.

Small Group Activity (10 min)

Mix number cards on the washing line and call students to arrange them in sequence (1-10).



Individual Activity (10 min)

Let each student make a number booklet for numbers 1-10.

Fold papers into a booklet.

Write each number (1-10) on a separate paper in the booklet.

Let students draw the quantity with each number.

Lesson 1: Number 10

Objective

By the end of this lesson, the students should be able to recognise the number 10.

Learning Curve

The concept of zero has been introduced already, so that the students can learn to count to 10 and beyond.

Learning Activity (30 min)

The learning activity on page 71 of the textbook can be carried out by following the approach adopted for the number 1.

Wrap up Activity (10 min)

You can initiate an activity where you call out a student and ask them to fetch you 'ten blocks' from the toy shelf. Thank them when they do so. Continue to do this with all the students by asking them to fetch 'ten flowers', 'ten dolls', 'ten cups', and so on. Arrange these objects in a corner and stick a sheet of paper on the wall above them. Write the number 10 on the sheet. This is now the '10 corner' of the classroom.

Lesson 2: Number 10

Objective

By the end of this lesson, the students should be able to recognise and write the number 10.

Learning Curve

The concept of zero has already been introduced, so that the students can learn to count to 10 and beyond.

Textbook Practice Pages

Page 72 and 73 (40 min)

The exercises on page 72 and 73 of the textbook can be carried out by following the approach adopted for previous lessons.

Lesson 3: Number 10

Objective

By the end of this lesson, the students should be able to recognise numbers 1 to 10.

Learning Curve

All numbers should be introduced together at this stage so that the students can learn to count to 10 and beyond.

Textbook Practice Pages

Page 74 and 75 (30 min)

Step 1. Ask the students to look at the first row on the page. Ask them to identify the object. Next, ask them how many. Count the objects with the students, pointing to each bow one at a time as you call out the numbers one, two, three, four. The students should answer, 'four bows'.

Step 2. Ask them to find where the number 4 is written.

Step 3. Once the students locate it, ask them to draw a line from the group of four bows to the number in the box.

Page 76 (10 min)

Ask the students to join dots 1 to 10 to complete the picture and then colour it.

Point out to the students that each one of us has 10 fingers and 10 toes. This concept must be explained fully to the students. Each student holds up 10 fingers and counts from 1-10. Teachers should remember that the counting system depends upon the 10 digits of the human hands.

Lesson 4

Objective

By the end of this lesson, the students should be able to recognise which number comes after and before a number, between two numbers.

Learning Curve

All numbers should be introduced together at this stage, as students have already learnt to count and write numbers 1 to 10.

Learning Activity (10 min)

Prepare flash cards with number 0 to 10 written on them, place them on the table. Call three students one by one and handover each one of them a card with number 2, number 3, and number 4. Make them stand in a horizontal line showing their cards clearly.

Next call the fourth student and ask him/ her to find the number which comes after 4. When he/ she has found the correct card with number 5 make the student stand at the end of line, showing his/ her card clearly. Other students can clap for the student to encourage.

Ask the students to count with you as you call out two, three, four, and five comes after four.

Textbook Practice Pages

Page 77 (10 min)

Step 1. Ask students to look at the first row on the page. Next, ask them to count the numbers with the you, pointing to each number one at a time as you call out the numbers one, two, three. Stop and ask what comes next. The students should answer, 'four'.

Step 2. Ask them to write the number 4 in the box.

Step 3. Repeat for the remaining numbers.

Page 77 (10 min)

Step 1. Ask students to look at the first row on the page. Next, ask them to count the numbers with the you, pointing to each number one at a time as you call out the numbers one and four. Stop and ask what comes between 2 and 4. The students should answer 'three',

Step 2. Ask them to write the number 3 in the box.

Step 3. Repeat for the remaining numbers.

Page 77 (10 min)

Step 1. Ask students to look at the first row on the page. Next, ask them to count the numbers with the you, pointing to each number one at a time as you call out the numbers one and two. Stop and ask what comes before one. The students should answer 'zero',

Step 2. Ask them to write the number 0 in the box.

Step 3. Repeat for the remaining numbers.

8 Addition

Suggested Activities

➢ **One More Than**

Whole Class Activity (10 min)

Take the students to climb up the stairs. Ask any one student to climb two steps and then to climb one more. Ask "How many steps have you climbed?" Repeat the same procedure with different students and different numbers to reinforce the concept of 'one more'.

Small Group Activity (10 min)

Divide students into groups and distribute small blocks to them. Ask them to show you 5 blocks, then ask them to add one more. Ask how many blocks they have? Repeat the same procedures with other numbers.

Individual Activity (10 min)

Give a ***laminated template*** with the pictures of 2 apples, 3 oranges, 1 ball etc. drawn on it.

Leave space to draw one more.

Let students draw one more with a marker and count, after adding one more.

Lesson 1: One More Than

Objective

By the end of this lesson, the students should be able to add numbers up to 5.

Learning Curve

By explaining the number sequence as '2 is 1 more than 1', '3 is 1 more than 2' and so on, addition is introduced in a practical manner. A great deal of practical work around the school or in the classroom is necessary for this.

Learning Resources

1. Ropes/ strings for making loops of various sizes.
2. An assortment of objects from students's everyday life like small dolls, sweets, toy cars, trains, helicopters, paper flowers, and leaves, etc.

Learning Activity (20 Minutes)

Take the students on a 'pebble collection' walk in the school ground. One student collects 1 pebble, and puts it in a bag. So, there is 1 pebble in the bag. Another student puts 1 more pebble in the same bag. Thus, when 1 more pebble is added to the bag that already contains 1 pebble, there would now be two pebbles in it. Similarly, 2 pebbles when added to 1 give 3 pebbles. Ask each student to repeat the same activity until they have 5 pebbles in the bag.

Next, make a loop on a table with a rope or a string. Ask a student to place a toy car in the loop, ask another student to place another toy car in the loop. Ask the students to count and tell how many cars altogether in the big loop?

More such activities can be carried out on the board with loops drawn and stars or smileys drawn inside the loops to display addition.

Additional Work

Continuous practice in addition needs to be given to students with fingers, bars of chocolate or anything else that is a part of their everyday life.

Textbook Practice Pages

Page 78 (20 min)

Step 1. Ask students to look at the first row on the page. Next, ask them to count the apples with you. Pointing to each apple one at a time, call out the numbers one and two. Stop and ask how many apples will I have if I add '1 more apple'. The students should answer, 'three'.

Step 2. Repeat for the remaining objects on the page.

➢ Altogether

Whole Class Activity (10 min)

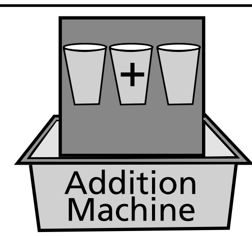
Ask students to count the fingers on one hand. Now ask them to count the fingers on another hand. Then ask them to count altogether. Repeat the same procedure with different quantities using beads/ counters/ crayons etc.

Small Group Activity (10 min)

Give different material to students for counting. For example two yellow pegs and three green pegs, four blue crayons and 1 red crayon, three pink counters and three orange counters etc. Ask them to put all the pegs together and count. Similarly put crayons altogether and count and so on.

Individual Activity (10 min)

Addition Machine — Make an Addition Machine and some ready-made sums on ice cream sticks (refer to the picture). Let the students pick up an ice cream stick, read a sum, for example, (2 + 3 =).



Put two counters in one glass of the addition machine and three counters in the other glass and then count all counters altogether to get the answer.

2 + 3 =

Lesson 2: Altogether

Objective

By the end of this lesson, the students should be able to add numbers up to 5.

Learning Curve

Explaining that we can also use the word 'altogether' for addition, along with 'more than'.

Learning Resources

1. Ropes/ strings for making loops of various sizes.
2. An assortment of objects from students's everyday life like small dolls, sweets, toy cars, trains, helicopters, paper flowers, and leaves, etc.

Learning Activity (10 min)

Ask students to count the fingers on one hand. Now ask them to count the fingers of another hand. Then ask them to count 'altogether'. Repeat the same procedure with different quantities using beads/ counters/ crayons etc.

Textbook Practice Pages

Page 79 (15 min)

Step 1. Ask students to look at the first row on the page. Next, ask them to count the stars with you. Pointing to the empty space and ask how many stars are drawn here, the students should answer 'zero' or 'no star is drawn'. Now ask "If I add '1 more star' how many stars will I have altogether?" The students should answer, 'one'.

Step 2. Repeat for the remaining stars on the page.

Page 79 (15 min)

Now repeat for the next task on the page.

Step 1. Ask students to look at the first row on the page. Next, ask them to count the hearts with you. Pointing to the hearts ask how many hearts are drawn here, the students should answer 'three'. Now ask "If I draw '2 more hearts' how many hearts will I have altogether?" The students should answer, '5 hearts'. Point out that one star has been drawn.

Step 2. Repeat for the remaining hearts on the page.

9 Subtraction

Suggested Activities

➢ **One Less Than**

Whole Class Activity (10 min)

Circle Time — Put 10 candies in front of the students and then tell them that you will give one candy to the student who will count well. Now count the candies with the students from 1 to 10. Give a candy to any one student who counted well. Now say that I have given one candy to _______, let's count the candies again to see how many are left. Count the candies again from 1 to 9 and say 1 less than 10 is 9.

Repeat the same procedure with all candies. After finishing all 10 candies, take out more candies to give them to all students.

Small Group Activity (10 min)

Give different material to students for counting, e.g. 2 pegs, 4 crayons, 6 counters etc. Ask them to count the material. Each time they count any material, ask them to give one to you and count what is one less than 6.

Individual Activity (10 min)

Give a laminated template with the pictures of 2 apples, 3 oranges, 1 ball etc. drawn on it (Use the same template that you used in the concept of 'one more than'). Let students strike off one object with the board marker and count the remaining objects.

Lesson 1: One Less Than

Objective

By the end of this lesson, the students should be able to subtract numbers up to 5.

Learning Curve

By explaining that '2 is 1 less than 3', '3 is 1 less than 4' and so on, subtraction is introduced in a practical manner.

Learning Resources

1. Ropes/ strings for making loops of various sizes.

2. An assortment of objects from students's everyday life like small dolls, sweets, toy cars, trains, helicopters, paper flowers, and leaves, etc.

Learning Activity (20 min)

Make a loop on a table with a rope or a string. Put 5 toys in the loop, ask a student to pick a toy from the loop and keep it outside the loop. Ask the students to count and tell how many toys are left inside the loop. Ask another student to remove another toy from the loop. Repeat the activity until no toy is left in the loop.

Note: More such activities can be carried out on the board with loops drawn and stars or smileys drawn inside the loop. Rub all the stars one by one to display subtraction.

Additional Work

Continuous practice in subtraction needs to be given to students with fingers, bars of chocolate or anything else that is a part of their everyday life.

Textbook Practice Pages

Page 80 (20 min)

Step 1. Ask students to look at the first row on the page. Next, ask them to count the glasses with you. Pointing to each glass one at a time call out the numbers one, two, three, and four. Stop and ask "If I remove '1 glass' how many glasses will be left?" The students should answer, 'three'. Say now you have '1 glass less than 4'.

Step 2. Repeat for the remaining objects on the page.

➢ **Take Away**

Whole Class Activity (10 min)

Circle Time — Keep ten counters in front of the students. Count them with the students and emphasise the quantity. Now say, 'Let's take away two counters' and take out 2 counters from 10. Count the counters again and let the students see how many are left. Repeat the same procedure by taking away 1, 3, and 4 etc. counters.

Small Group Activity/ Individual Activity (10 min)

Let the students practice the concept of take away by giving 10 counters and asking them to take away 3, 1, 6 etc. and count.

Lesson 2: Take Away

Objective

By the end of this lesson, the students should be able to subtract numbers up to 5.

Learning Curve

Through addition, learnt in the earlier pages, students automatically get an idea of 'more than' and 'less than' and consequently the concept of 'taking away' becomes intuitive.

Subtraction becomes easy for students to grasp with the use of practical examples like: 'I had 4 sandwiches, he took away 2'; 'I had 3 chocolates, I gave 1 to my sister' and so on. Students enjoy learning through a practical discovery approach.

Explaining that we can also use the word 'take away' for subtraction, along with 'less than'.

Learning Resources

It is useful to have baskets of plastic vegetables and fruit. Each basket contains 5 oranges or 5 onions. But any other objects from real life, as used in earlier pages for addition, will do just as well.

Learning Activity (10 min)

Hold three pencils in your hand, show them to the students and ask 'how many'? Put two pencils on the table, and ask the students to count the remaining pencils. Then ask how many pencils have been taken away, ask again how many pencils in your hand. Repeat the same procedure with different quantities using beads/ counters/ crayons etc.

Textbook Practice Pages

Page 81 (10 min)

Step 1. Ask students to look at the first row on the page. Next, ask them to count the stars with you. Pointing to the empty space and ask how many stars are drawn here, the students should answer 'zero' or 'no star is drawn'. Now ask "If I have not taken away any star, how many stars will I have?" The students should answer, 'one'. Then draw one star in the box.

Step 2. Repeat for the remaining stars on the page.

Page 81 (10 min)

Now repeat for the next task on the page.

Step 1. Ask students to look at the first row on the page. Next, ask them to count the balls with you. Pointing to the balls ask how many balls are drawn here, the students should answer 'five'. Now ask "If I take away 3 balls how many balls will I have now?" The students should answer, '2 balls'.

Step 2. Repeat for the remaining balls on the page.

10 Shapes: Part Two

Suggested Activities

➢ **Square**

Whole Class Activity (10 min)

Activity 1: Each student is given a number of paper cut outs of 2D shapes like square, rectangle, triangle, circle, and oval of different sizes and then you can ask them to sort out and make a set of each shape.

Activity 2: Take the students for a *'Shape Hunt'* around the school and find the things that are square in shape.

Small Group Activity (10 min)

Make a big square on one whole chart paper with a marker. Also, cut a lot of shapes, such as square, triangle and circle from newspaper and keep them in a basket. Let students sort out squares from the basket and paste them on the big square drawn on the chart paper.

Individual Activity (10 min)

Provide 4 ice-cream sticks to each student along with a sheet of paper. Guide them to make a square out of 4 sticks by pasting the sticks on the paper.

Lesson 1: Square

Objective

By the end of this lesson, the students should be able to identify a square shape.

Learning Curve

The students are likely to have come across shapes similar to squares in different sizes. Hence, their awareness of 2-dimential shapes may be developed at this level.

Learning Resources

Pictures and cut-outs of squares of different sizes.

Learning Activity (20 min)

Show a cut-out of a square and explain that a square is a flat shape, it has four sides, and all four sides are equal in length. Take the students for a 'Shape Hunt' around the school and find the things that are square in shape.

Prepare flash cards of a square, rectangle, triangle, circle, and oval. Put them in a basket. Let students sort out squares from the basket and place them on the table.

Additional Work

Ask the students to collect their own pictures of some objects that have a square face. They can paste these pictures in their copies.

Textbook Practice Pages

Page 82 (20 min)

Step 1. Ask students to look at the first shape on the page.

Step 2. Ask them to trace the dotted lines.

Step 3. Next ask them to colour the square.

Step 4. Draw lots of squares of different sizes with dotted lines on a sheet of paper. Hand over the worksheet to students. Ask them to repeat step 2 and 3.

➢ Rectangle

Whole Class Activity (10 min)

Take the students for a *'Shape Hunt'* around the school and find the things that are rectangular in shape.

Small Group Activity (10 min)

Prepare ***feely bag*** with different shaped cutouts (laminated) in it. Let the students take turns to hunt a rectangle from the ***feely bag***.

Individual Activity: (10 min)

Give the students rectangular pieces of paper (6″ × 4″) along with rectangular pieces of sponge (2″ × 1″). Let them dip the sponge in paint and print it on the rectangular paper.

Lesson 2: Rectangle

Objective

By the end of this lesson, the students should be able to identify a rectangle.

Learning Curve

The students are likely to have come across shapes similar to rectangles in different sizes. Hence, their awareness of 2-dimential shapes may be developed at this level.

Learning Resources
Pictures and cut-outs of rectangles of different sizes.

Learning Activity (20 min)
Adopt the same approach for the rectangle, as in the previous lesson on the square.

Textbook Practice Pages
Page 82 (20 min)

Adopt the same approach for the rectangle, as in the previous lesson on the square.

➢ **Triangle**

Whole Class Activity (10 min)
Make a huge triangle with paper tape outside the classroom. Let students walk on the triangle.

Small Group Activity (10 min)
Make a big triangle on one whole chart paper with a marker. Also cut a lot of squares, triangles and circles (small sized) from newspaper and keep them in a basket. Let students sort out triangles from the basket and paste them on the big triangle drawn on the chart paper.

Individual Activity (10 min)
Provide 3 ice-cream sticks to each student along with a sheet of paper. Guide them to make a triangle out of 3 sticks by pasting the sticks on the paper.

Lesson 3: Triangle

Objective
By the end of this lesson, the students should be able to identify a triangle.

Learning Curve
The students are likely to have come across shapes similar to triangles in different sizes. Hence, their awareness of 2-dimential shapes may be developed at this level.

Learning Resources
Pictures and cut-outs of triangles of different sizes.

Learning Activity (20 min)
Adopt the same approach for the triangle, as in the previous lesson on the square.

Textbook Practice Pages
Page 82 (20 min)

Adopt the same approach for the triangle, as in the previous lesson on the square.

➢ Circle

Whole Class Activity (5 min)

Shape Hunt — Hide 8 to 10 circle cutouts in the classroom. During circle time send a group of 3 to 4 students to hunt for a circle. Once they get back with a circle, send another group and so on.

Small Group Activity (10 min)

Provide different shaped buttons to the students. Ask them to sort out circle shaped buttons.

Individual Activity (10 min)

Provide 7 to 8 green coloured, small circle cut outs to the students along with a paper sheet. Ask them to make caterpillars by pasting these cut outs on the sheets.

Lesson 4: Circle

Objective

By the end of this lesson, the students should be able to identify a circle.

Learning Curve

The students are likely to have come across shapes similar to circles in different sizes. Hence, their awareness of 2D shapes may be developed at this level.

Learning Resources

Pictures and cut-outs of circles of different sizes.

Learning Activity (20 min)

Adopt the same approach for the circle, as in the previous lesson on the square.

Textbook Practice Pages

Page 82 (20 min)

Adopt the same approach for the circle, as in the previous lesson on the square.

➢ Oval

Whole Class Activity (10 min)

Shape Hunt — Hide 8 to 10 oval cutouts in the classroom. During circle time send a group of 3 to 4 students to hunt for ovals. Once they get back with an oval, send another group and so on.

Small Group Activity (10 min)

Make big cut outs of ovals, circles, triangles, squares and rectangles from card sheet. (Use half card sheet to make one cut-out.) Also make small cutouts of all these shapes from newspaper. Mix all the small cutouts and put them in a basket. Let students sort small cutouts and paste them onto the relevant big cutout.

Individual Activity (10 min)

Potato Printing - Cut a whole potato into two halves. Cut one half in the shape of an oval. Let students dip oval shaped potato in paint and print it on the paper.

Lesson 5: Oval

Objective

By the end of this lesson, the students should be able to identify an oval.

Learning Curve

The students are likely to have come across shapes similar to an oval in different sizes. Hence, their awareness of 2-dimential shapes may be developed at this level.

Learning Resources

Pictures and cut-outs of ovals of different sizes.

Learning Activity (20 min)

Adopt the same approach for the oval, as in previous lesson on square.

Textbook Practice Pages

Page 82 (20 min)

Adopt the same approach for the oval, as in previous lesson on square.

Lesson 6: Oval

Objective

By the end of this lesson, the students should be able to identify a shape and match it with its name.

Learning Curve

The students are likely to have come across shapes similar to all 2D shapes in different sizes. Hence, their awareness of these shapes may be developed at this level.

Learning Resources

Pictures and cut-outs of square, rectangle, triangle, circle, and ovals of different sizes.

Learning Activity (20 min)

Use the same cut-outs made before. Mix all the cut-outs and put them in a basket. Let students sort the shapes one by one.

Textbook Practice Pages

Page 82 (20 min)

Adopt the same approach for the oval, as in the previous lesson of the square.

Activity (20 Minutes)

Adopt the same approach for the rectangle, as in the previous lesson on the square.

Textbook Practice Pages

Page 82 (20 min)

Adopt the same approach for the rectangle, as in the previous lesson on the square.

11 Time

Suggested Activities

➢ **Day and Night**

Whole Class Activity (20 min)

Pajama Party — Have a pajama party in school and let students come in their pajamas. Switch off the lights of the classroom, tell them a bedtime story and let them pretend it is sleeping time. Also talk about morning and breakfast time.

Small Group Activity (10 min)

Prepare flash cards of morning time activities e.g. waking up, taking breakfast, going to school, playing etc. and night time activities e.g. listening to bed time stories, wearing pajamas, sleeping etc. (collect the pictures from internet/ magazines or old books). Mix up the cards and let students sort day time and night time activities.

Individual Activity (10 min)

Give a piece of black card (4″ × 4″) and a piece of white card (4″ × 4″) to the students. Also provide pictures of sun, bird, moon, stars etc. Let them paste morning time pictures on the white sheet and night time pictures on the black sheet.

Lesson 1: Time

Objective

By the end of this lesson, the students should be able to differentiate between day and night.

Learning Curve

By explaining the activities we do during day and night the difference can be easily understood by the students.

Learning Resources

Different pictures and post cards showing activities done during day and night time.

Learning Activity (20 min)

Ask the students to look at the picture of the day given on page 85. Ask them what they notice. Then ask them what they do in the day time?

Next ask the students to look at the picture of the night given on page 85. Ask them what they notice. Then ask them what do they do at night.

Additional Work

Ask the students to collect their own pictures of some activities that are a part of their everyday life. They can paste these pictures in the correct order to make their own album of day and night activities.

Small Group Activity (20 min)

Prepare flash cards of morning time activities e.g. waking up, taking breakfast, going to school, playing etc. and night time activities e.g. listening to bed time stories, wearing pajamas, sleeping etc. (collect the pictures from internet/ magazines or old books). Mix up the cards and let students sort day time and night time activities.

➢ **Calendar**

Whole Class Activity (10 min)

Show a wall calendar, a table calendar and a pocket calendar to the students. Let them try to read a few numbers. Sing the rhyme of days of the week.

Small Group Activity (10 min)

Make flash cards of days of the week and number them from 1-7. Let students arrange the cards in sequence.

Individual Activity (10 min)

Give individual practice to the students to arrange days of the week in sequence. Use the same flash cards that were used in small the group activity.

Lesson 2: Calendar

Objective

By the end of this lesson, the students should be able to name the days of the week and remember their correct sequence.

Learning Curve

By the time students start going to school, they already have an idea about the names of the days.

Learning Resources

Different types of calendars.

Learning Activity (20 min)

Show a wall calendar, a table calendar, a pocket calendar, and then the calendar given on page 86.

Let them try to a read a few numbers. Sing the rhyme of days of the week. Ask the students what they do on different days.

Small Group Activity (20 min)

Prepare flash cards of the days of the week. Mix up the cards and call students one by one and ask them to put the cards in the correct sequence.

12 Comparison: Part Two

Suggested Activities

➢ **Big and Small**

Whole Class Activity (10 min)

Students learn the concepts of 'big' and 'small' in the classroom using objects around them, e.g. a big piece of chalk and a small one, a big book and a small one, etc.

In the garden, they could observe a big tree and a small one, a big leaf and a small one, etc.

Take students for a walk and let them observe different big and small things e.g. a big ball and a small ball, a big door and a small door, a big boy/ girl and a small boy/ girl etc.

Small Group Activity (10 min)

Provide different big and small objects to the students e.g. a big ball and a small ball, a big bottle and a small bottle, a big doll and a small doll, a big plate and a small plate. Let them sort big and small objects.

Individual Activity (10 min)

Provide play dough to the students and ask them to make different big and small objects.

Lesson 1: Big and Small

Objective

By the end of this lesson, the students should be able to recognise opposites such as big and small.

Learning Curve

The students are likely to have come across similar objects in different sizes. Hence, their awareness of concepts such as big and small may be developed at this level.

Learning Resources

Objects in different sizes such as big and small balls and toy cars, etc.

Learning Activity (20 min)

Step 1. Pick out a big ball from the toys and hold it up. Ask the students to identify it.

Step 2. Now, pick out a smaller ball and hold it up. Ask the students to identify it.

Step 3. Hold up the big ball and say, 'big ball'. Ask the students to repeat your words.

Step 4. Hold up the smaller ball and say, 'small ball'. Ask the students to repeat your words.

Step 5. Repeat this exercise with other objects such as cars, dolls, bats, and so on.

Textbook Practice Pages

Page 87 (10 min)

Step 1. Ask the students to look at the objects.

Step 2. Ask the students to identify the big cat and the small cat.

Step 3. Next, ask them to draw a circle around the big cat with a pencil.

Step 4. Repeat steps 2 and 3 with the big and small dog and chair.

Page 88 (10 min)

Step 1. Ask the students to look at the objects.

Step 2. Read out the question and ask the students to identify the big and the small box.

Step 3. Next, ask them to colour the big box red and small box green.

Step 4. Repeat steps 2 and 3 with the big and small star and ball.

➢ Thick and Thin

Whole Class Activity (10 min)

Take students to the school ground and let them observe thick and thin branches of the trees. Also show them thick and thin books from the library.

Small Group Activity (10 min)

Provide newspaper to the students and help them make thick and thin rolls from the newspaper.

Individual Activity (10 min)

Give a piece of paper to each student and let them draw thick and thin pencils on it.

Lesson 2: Thick and Thin

Objective

By the end of this lesson, the students should be able to recognise opposites such as thick and thin.

Learning Curve

The students are likely to have come across similar objects in different sizes. Hence, their awareness of concepts such as thick and thin may be developed at this level.

Learning Resources

Objects in different sizes such as thick and thin books and toys, etc.

Learning Activity (20 min)

Step 1. Pick out a thick book and hold it up. Ask the students to identify it.

Step 2. Now, pick out a thinner book and hold it up. Ask the students to identify it.

Step 3. Hold up the thick book and say, 'thick book'. Ask the students to repeat your words.

Step 4. Hold up the thin book and say, 'thin book'. Ask the students to repeat your words.

Step 5. Repeat this exercise with other objects such as erasers, fruits, bags, and so on.

Textbook Practice Pages

Page 89 (10 min)

Step 1. Ask the students to look at the objects.

Step 2. Ask the students to identify the thick jug and the thin glass.

Step 3. Next, ask them to draw a circle around the thick jug with a pencil.

Step 4. Repeat steps 2 and 3 with other given objects.

Page 90 (10 min)

Step 1. Ask the students to look at the objects.

Step 2. Read out the question and ask the students to identify the thick objects.

Step 3. Next, ask them to circle the thick bottle and burger.

Step 4. Repeat steps 2 and 3 with thin biscuit and envelope.

➢ Long and Short

Whole Class Activity (10 min)

Take students outside and involve them in a tug of war game. Divide them into two teams. Give one team a short rope whereas the other team should be given a long one. Keep repeating and focusing on the terms 'long' and 'short'

Small Group Activity (10 min)

Collect different long/short objects in the classroom e.g. long and short pencils, ropes, rulers, sticks etc. and keep them at different places in the classroom. Divide the students into two groups. One group to sort the long objects and the other to sort the short items. Let them observe those long and short objects.

Individual Activity (10 min)

Provide students with play dough of two different colours and ask them to make a long snake and a short snake.

Lesson 3: Long and Short

Objective

By the end of this lesson, the students should be able to recognise opposites such as long and short.

Learning Curve

The students are likely to have come across similar objects in different sizes. Hence, their awareness of concepts such as long and short may be developed at this level.

Learning Resources

Objects in different sizes such as long and short pencils, etc.

Learning Activity (20 min)

Step 1. Pick out a long piece of string from the toys and hold it up. Ask the students to identify it.

Step 2. Now, pick out a smaller piece of string and hold it up. Ask the students to identify it.

Step 3. Hold up the long string and say, 'long string'. Ask the students to repeat your words.

Step 4. Hold up the shorter string and say, 'short string'. Ask the students to repeat your words.

Step 5. Repeat this exercise with other objects such as pencils, bats, dolls' hair, etc.

Textbook Practice Pages

Page 91 (10 min)

Step 1. Ask the students to look at the objects on top of the page.

Step 2. Ask the students to identify the long pencil and short pencil.

Step 3. Next, ask them to draw a circle around the short pencil with a pencil.

Step 4. Repeat steps 2 and 3 with the long and short given objects.

Page 92 (10 min)

Step 1. Ask the students to look at the objects given on the page.

Step 2. Read out the question and ask the students to identify the long ruler and short ruler.

Step 3. Next, ask them to draw a circle around the short ruler with a pencil.

Step 4. Repeat steps 2 and 3 with the long and short carrots.

Step 5. Repeat steps 2 with the long and short arrows.

Step 6. Next, ask them to colour the long arrow blue and short arrow green.

➢ **Tall and Short**

Whole Class Activity (10 min)

Take students outside and make them stand in a group. Call two students of different heights and let them stand side-by-side. Explain that some students are tall and some are short. Then ask all the students to stand in a vertical line according to their heights. Keep repeating the terms 'tall' and 'short', by comparing two students.

Small Group Activity (10 min)

Collect pictures of different tall/short objects e.g. trees, buildings, rulers, sticks etc. and keep them at different places in the classroom. Divide the students into two groups. One group to sort the tall objects whereas the other one to sort the short items. Let them observe those tall and short objects.

Individual Activity (10 min)

Provide students with play dough of two different colours and ask them to make tall and a short objects of their choice.

Lesson 4: Tall and Short

Objective

By the end of this lesson, the students should be able to recognise opposites such as tall and short.

Learning Curve

The students are likely to have come across objects of different heights. Hence, their awareness of concepts such as tall and short may be developed at this level.

Learning Resources

Objects of different heights such as tall and short toys, 6 inch, 12 inch, and 1 metre rulers. etc.

Learning Activity (20 min)

Step 1. Call two students one tall and one short and make them stand side-by-side.

Step 2. Now, point towards the taller student and ask whether he/she is tall.

Step 3. Hold up the hand of the taller one and say, 'Ahmed is tall'. Ask the students to repeat your words.

Step 4. Hold up the hand of the shorter one and say, 'Sana is short'. Ask the students to repeat your words.

Step 5. Repeat this exercise with other students or objects such as pencils, bats, hair of students, etc.

Textbook Practice Pages

Page 93 (10 min)

Step 1. Ask the students to look at the objects on the page.

Step 2. Ask the students to identify the tall and short boy.

Step 3. Next, ask them to draw a circle around the short boy with a pencil.

Step 4. Repeat steps 2 and 3 with the tall and short given objects.

Page 94 (10 min)

Step 1. Ask the students to look at the objects given on the page.

Step 2. Read out the question and ask the students to identify the tall girl and the short girl.

Step 3. Next, ask them to put a tick in the box for the tall girl.

Step 4. Repeat steps 2 and 3 with the tall and short mugs.

Step 5. Repeat steps 2 and 3 with the tall and short buildings and animals, explaining that a tick is to be put in the box of the short one.

➢ Light and Heavy

Whole Class Activity (10 min)

Collect several different types of balls, some that are very light and others that are heavier: beach balls, ping pong balls, soccer balls, tennis balls etc. Take the students outside to play with these balls. As you play with the students, help them notice how some balls are heavy and some are light.

Small Group Activity (10 min)

Collect pictures that represent heavy and light items: trucks, houses, mice, birds, ants, buttons etc. (Select objects that students are familiar with.) Take a sheet of card and divide it into two halves. Encourage students to stick the pictures of heavy objects on one half of the card and pictures of light objects on the other half.

Lesson 5: Light and Heavy

Objective

By the end of this lesson, the students should be able to compare light and heavy objects.

Learning Curve

The students are likely to have come across similar objects of different weights. Hence, their awareness of concepts such as light and heavy may be developed at this level.

Learning Resources

Objects of different weights such as fruit and vegetables, weighing machine, etc.

Learning Activity (20 min)

Step 1. Pick out a heavy fruit/ vegetable from the basket and hold it up. Ask the students to identify it.

Step 2. Now, pick out a lighter fruit/ vegetable from the basket and hold it up. Ask the students to identify it.

Step 3. Hold up an apple and say, ‘apple is heavy’. Ask the students to repeat your words.

Step 4. Hold up a banana and say, ‘banana is light’. Ask the students to repeat your words.

Step 5. Repeat this exercise with other fruit/ vegetables.

Textbook Practice Pages

Page 95 (10 min)

Step 1. Ask the students to look at the first pair of animals on the page.

Step 2. Ask the students to identify the heavier and the lighter one.

Step 3. Next, ask them to draw a circle around the lighter one with a pencil.

Step 4. Repeat steps 2 and 3 with the heavy and light objects.

Page 96 (10 min)

Step 1. Ask the students to look at the objects given on the page.

Step 2 Read out the question and ask the students to identify the heavy and light objects.

Step 3. Next, ask them to draw a circle around the heavy object.

Step 4. Repeat steps 2 and 3 for the bird and feather.

Step 5. Repeat steps 2 and 3 for other objects on the page, drawing a circle around the lighter objects.

13 Position

➢ Up and Down

Whole Class Activity (10 min)

Ask the students to raise their hands ‘up’, then ask them to put them to put ‘down’. Similarly, you can repeat the activity for ‘thumbs up’ and ‘thumbs down’.

Small Group Activity (5 min)

Divide students into groups. Each student takes turn to point out something that is up or down in the classroom. The other members of the group put a tick on top of their white board or laminated sheet, if the object is up and a tick at the bottom if the object is down.

Individual Activity (10 min)

Provide pictures of some things e.g. aeroplane, kite, bird, car, tree, ball, shop, and bat, etc. Ask the students to paste them in their copies. Next tell them to ciclre the things that can be seen up in the sky .

➢ Inside and Outside

Whole Class Activity (10 min)

Tell the students that today they will go ‘outside’ the classroom and play in the playground. Keep repeating the word ‘outside’ while playing to strengthen the concept. After that tell them to go inside the classroom.

Small Group Activity (5 min)

Simon Says Game - Give a few crayons and a few baskets to the students. Play the game by saying: ‘Simon says put the crayons inside the basket/ put the crayons outside the basket’. Be quick in giving the instructions and see if they are following the instructions correctly or not.

Individual Activity (10 min)

Provide a picture of fish bowl. Also provide cutouts of 2 fish. Let them paste one fish inside the bowl and the other outside the bowl.

Lesson 1: Inside and Outside

Objective

By the end of this lesson, the students should be able to identify the positions of objects.

Learning Curve

The students are likely to have come across objects kept up or down and inside or outside in their daily life. Hence, their awareness of these concepts may be developed at this level.

Learning Resources

Objects such as empty box, basket, fruits, vegetables, and toys, etc.

Learning Activity (10 min)

Step 1. Ask the students to look at the monkeys on page 97.

Step 2. Point towards the monkey on the roof, and say 'up'.

Step 3. Next point towards the monkey on the floor, and say 'down'.

Step 4. Repeat steps 2 and 3 for the bird and the ball.

Step 5. Repeat the exercise by placing different objects on the table and floor.

Learning Activity (10 min)

Step 1. Ask the students to look at the fruit on page 97.

Step 2. Point towards the fruit inside the basket, and say 'inside'.

Step 3. Next point towards the fruit outside the basket, and say 'outside'.

Step 4. Repeat steps 2 and 3 for the balls.

Step 5. Repeat the exercise by placing different objects inside and outside an empty box or basket.

Textbook Practice Pages

Page 98 (10 min)

Step 1. Ask the students to look at the ball on the page.

Step 2. Ask the students to identify the ball which is inside the box.

Step 3. Ask the students to identify the ball which is outside the box.

Step 4. Next, ask them to put a tick on the one which is inside the box with a pencil.

Step 5. Repeat steps 2, 3 and 4 with the flowers.

Step 6. Repeat steps 2, 3 and 4 with the flash cards and the potatoes, by putting a tick on the objects that are outside.

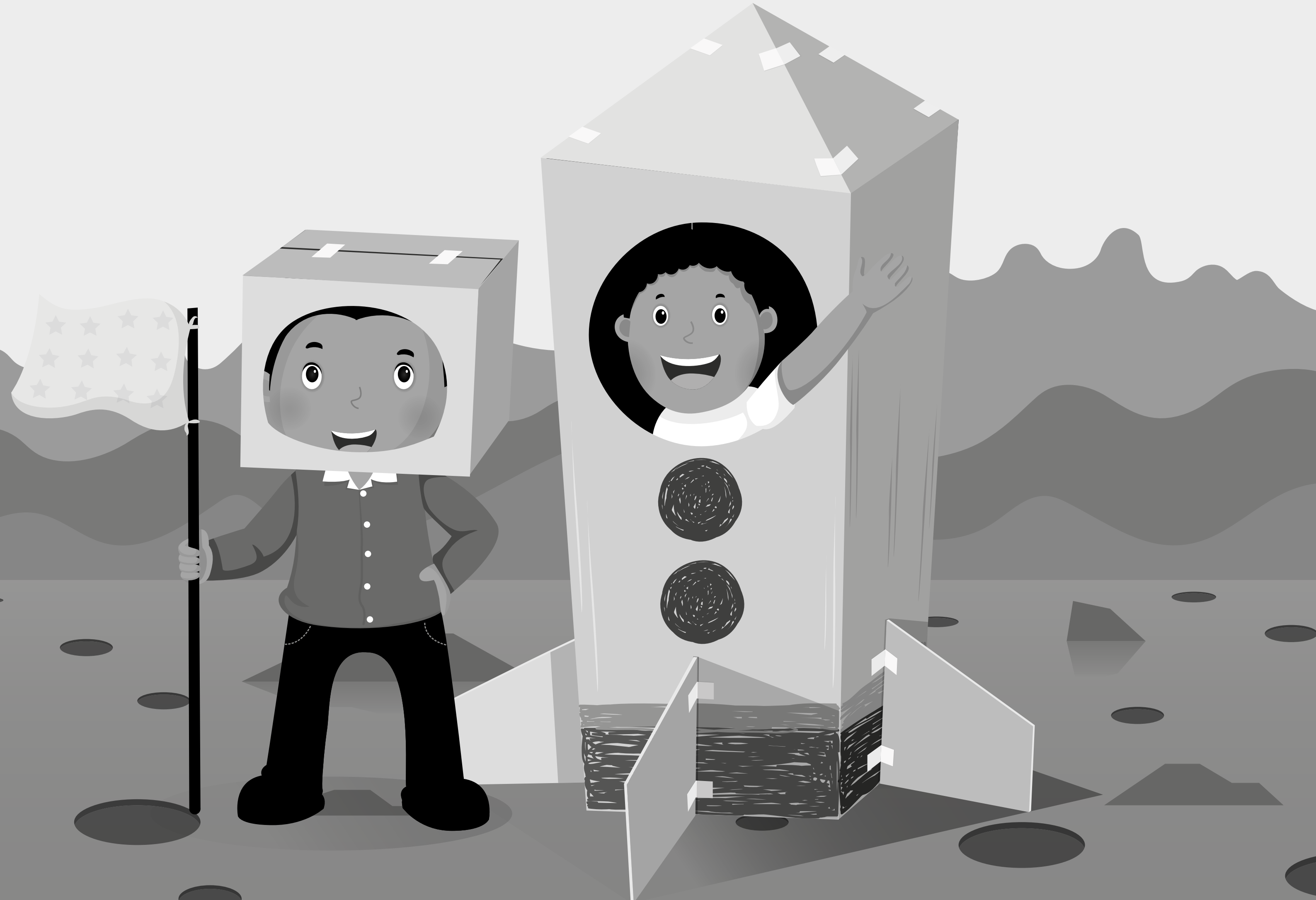
NEW

COUNTDOWN

PRIMER A

THIRD EDITION

TEACHING GUIDE



1 Colours

This unit is based on creative and fun pages where the following concepts have been revised:

- Colouring objects (for recognition of colours and to improve motor control)
- Matching shapes and grouping them together
- Shadow matching

All these reinforce earlier concepts and prepare students for the discovery ahead.

Lesson 1: Colours

Objective

By the end of the lesson, students should be able to identify at least the three most common colours - red and the two main colours in nature: the blue colour of the sky and the green colour of grass.

Learning Curve

Students are already familiar with black and white, having observed the colour of milk, their own hair, shoes, etc.

The teacher can reinforce the names of colours by pointing to red roses, the sky, the sea, the grass or the trees or by means of nursery rhymes like the following:

The grass is green,

The rose is red,

The sky is blue,

And, I love you.

Learning Resources

Baskets painted in red, green, and blue with swatches of matching fabrics, painted wooden blocks, paper flowers, and other items with these colours that students see in their daily life, worksheets.

Learning Activity (20 min)

Step 1. In the school playground, the teacher asks the students to show anything which is green and asks one student to point to the grass and trees. Another student is asked to fetch a matching block from the basket. Both the students get a paper smiley on their collar for identifying the colour correctly.

Step 2. The teacher now asks a student to point to something blue. The student points to the sky (or to his/her uniform, if applicable) and another student brings a swatch of blue fabric from the basket. Both of them get smileys.

Step 3. Repeat the same exercise with red, orange, and yellow. Orange and yellow are a little tougher to identify. Yellow is the colour of the Sun and orange is found in oranges.

The teacher can make the students stand in a circle, sing and dance to the tune of the song 'If you are happy and you know it'.

The song goes as follows:

If you're happy and you know it, clap your hands (clap, clap, clap)

If you're happy and you know it, and you really want to show it,

If you're wearing red and you know it, shake your head,

If you're wearing blue and you know it, touch your shoe,

If you're wearing black and you know it, pat your back.

Textbook Practice Pages (20 min)

Encourage students to colour the picture given on page 2 neatly.

Additional Work

Many more colouring pages like the one given on page 2 are necessary. Students can colour these pages in the classroom, in the playground or at home. They can make handprints and footprints on newspapers using poster paints and then compare sizes.

Wrap up Activity

'Colour Week' can also be organised in the class where the classroom is decorated according to the 'colour of the week.' If blue is the colour of the week, then activities based on the colour blue can be done with the students. The bulletin board too should have objects that are blue.

➢ Matching the Pairs

Suggested Activities

Whole Class Activity (10 min)

Prepare a basket with lots of toys/ objects/ pictures that come in sets e.g. lock and key, toothpaste and toothbrush, badminton and shuttle cock, bat and ball, cup and saucer, pencil and eraser, table and chair, shoes and socks etc. Demonstrate to the students how to match all sets on the mat, involving students.

Small Group Activity (10 min)

Let students practice making sets using the same basket which was used for demonstration activity.

Individual Activity (5 min)

Prepare ***laminated templates*** for matching different objects e.g. table and chair, cup and saucer, pencil and eraser, table and chair, shoes and socks etc. (refer to page 3.) Let students match the objects with their pair using board markers.

Lesson 2: Matching the Pairs

Objective

To enable students to realise that there are certain things that go together, even if they are not identical, and that two unlike objects can also form a pair in the sense that they are incomplete without the other.

Learning Curve

Identifying pairs of identical objects such as 2 clips or 2 ear-rings or 2 sandwiches is very easy. The students now learn that there are certain things that go together, but are not identical, i.e. two unlike objects can also form a pair in the sense that they are incomplete without the presence of the other.

Students are familiar with non-identical pairs from an early stage. For example, they have seen their mothers sew clothes using a needle and thread or their fathers drink tea from a cup and saucer. Similarly, they might also have noticed their elders eat with a fork and knife. It would be useful to bring out these points in the classroom while discussing this topic.

Recognising such unlike pairs develops conceptual skills which helps in working out associations between numbers at a later stage.

Learning Resources

A basket full of mixed pairs of non-identical objects, such as lock and key, fork and spoon, racquet and shuttle, toothbrush and toothpaste, etc., could be placed on a table for the students to match. Several charts with colourful objects drawn on them, some in pairs and some not, may be used to familiarise students with identical and non-identical pairs.

Learning Activity (20 min)

Place a few non-identical pairs of objects on the table. Tell students to go to the table, one by one and pick up pairs of non-identical objects, turn around and show them to the class. Some students find the non-identical pairs on charts. Others talk about the non-identical pairs in the room (table and chair.)

Textbook Practice Pages (10 min)

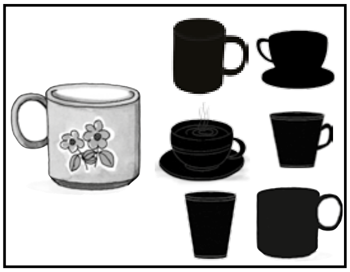
Tell students to match the objects given on page 3.

Additional Work

Students bring pictures from old magazines which form non-identical pairs. An open discussion on identical and non-identical pairs would be useful. It may be pointed out to them that a pair of shoes (left and right) form a non-identical pair and so does a pair of gloves.

Wrap up Activity (10 min)

The teacher may separate the available non-identical pairs and put them into two different cartons which are then placed in two different corners of the room. The utility of each of the objects in one carton can be discussed and the kids are made to realise that each object in one carton is incomplete without its counterpart in the other. Consequently students can go to the other corner one by one and find the matching object for all non-identical pairs.



➢ Shadow Matching

Suggested Activities

Whole Class Activity (10 min)

Take students to the playground and let them observe their shadows in sunlight.

Small Group Activity (10 min)

Hang a white cloth sheet across the classroom or any other suitable room using a string and pegs. Place a strong light behind the sheet. Send any student behind the sheet so his/her shadow is visible to the rest of the students. Let the students guess whose shadow it is. Send different students each time and let others guess.

You can also use different toy animals and objects to cast their shadow on the curtain.

Individual Activity (5 min)

Take pictures of different animals (at least 4 to 5) and cut them out neatly.

On a black or grey sheet of card draw the outlines of these animals, then cut them out too, to make shadows. Now, make flash cards of both the cut-outs by pasting both the pictures on 4" × 4" card sheet. Let the students match the animals with their shadows.

Make ***laminated templates*** of the original picture and the shadows of similar other objects. Let students circle the correct shadow with a board marker.

Lesson 3: Shadow Matching

Objective

By the end of this lesson, the students should be able to associate an outline (or a shape) with the object it represents.

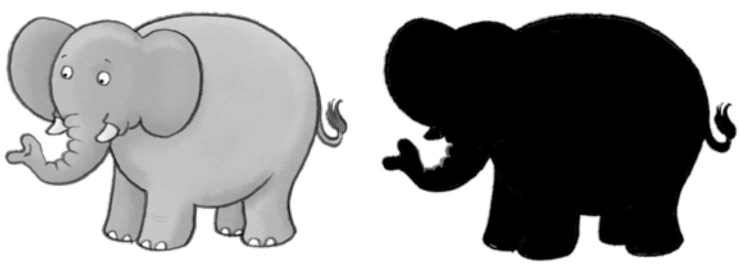
Learning Curve

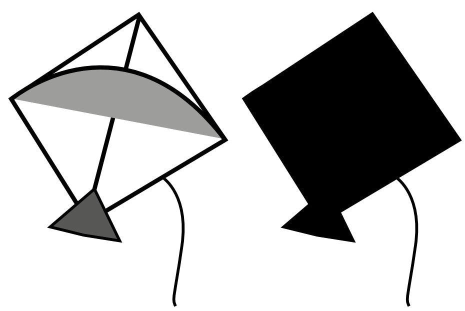
Students learn to recognise objects from the outlines, such as packed gifts. This also involves association and recognition of shapes such as the wings of an aeroplane which stick out in the packed gift. The outline or the shape of a ball, when gift wrapped, is easily discernable. Students learn to observe how the shape of a cricket bat differs from that of a hockey stick.

This skill is very important for sensory perception. Visualising the actual object through its outline or a shadow helps in building imagination and logic.

Learning Resources

- A number of cut-outs of different objects placed on a table, such as a pair of palm trees, a pair of bicycles, and a pair of boats with sails.
- A chart with pictures of various objects and their shadows, such as an elephant with the trunk raised, a kite, a balloon, an aeroplane, a hockey stick and their shadows, etc.





- A table full of gift-wrapped toys such as an aeroplane, a ball, and a cola bottle.

Learning Activity (20 min)

- Place different cut-outs of a pair of horses, cars, trains or dolls etc. on a table. Call the students to the table one by one and asks them to pick up two similar cut-outs.
- Shadows are best introduced in the playground with the bright sun casting shadows of birds, poles, trees etc. The students place their hands near the grass and see the shadows of their hands cast on the grass. Alternatively, this exercise can also be done in front of a lamp with moving fingers. A shadow of a fan can also be cast on the ceiling by placing the source of light on the floor. The students learn to pair the shadow with the object that is casting it.

- Place assorted wrapped gifts on the table, showing distinct outlines of the toys inside. Example: an aeroplane, with its two wings on the side; a ball, a bicycle with the outline of the wheels showing through, a doll, and so on.

Then divide the class into two groups. Ask a student from one group to pick up a packed object and ask the students in the other group to identify it. The game goes on with the groups switching roles.

Textbook Practice Pages (10 min)

After a number of activities as mentioned above are carried out, both indoors and outdoors, ask students to match animals to their shadows given on page 4.

Additional Work

Additional work involves identifying two pictures, one large and one small, of the same object such as the shadows of a large tree and a small tree of the same shape.

Story-telling with the shadow-technique, also helps the students grasp the concept better.

Wrap up Activities (10 min)

The doors to the classroom can be left open with a white curtain drawn across the frame. The students guess what/ who is on the other side, based on the shadow that he/she is able to make, standing behind the curtain.

2 Comparison: Part One

This unit is based on reinforcement of concepts taught earlier. The following concepts have been revised here to prepare students for the discovery ahead.

- Few and many
- More and less
- Hot and cold

➢ Few and Many

Suggested Activities

Whole Class Activity (10 min)

Involve all students in this activity. Ask them to identify 'few' and 'many' objects that they see around them during the day. Ask them what they think are the following few or many:

- Stars they see at night
- Leaves on trees
- Flowers on plants

Small Group Activity (10 min)

Give a basket to a group of students and ask them to collect a few pieces of chalk and many crayons from the classroom. Similarly ask one group to collect a few erasers and many pencils and another group to collect a few pegs and many ***counters***.

Individual Activity (10 min)

Prepare a worksheet with a picture of two trees drawn on it. Let students draw a few leaves on one tree and many leaves on the other tree, then colour the leaves green.

➢ More or Less

Suggested Activities

Whole Class Activity (5 min)

Circle Time – Introduce more/ less through different activities e.g. ask students to bring a basket of more crayons, put less water in a glass, give more pencils etc.

Small Group Activity (5 min)

Give ***counters*** to the group in ample quantity. Ask them to give you different quantities e.g. 2 ***counters***, 5 ***counters***, 8 ***counters*** etc. Once they give you a correct quantity, ask them to give you a few more. Similarly make them practice the concept of 'less'.

Individual Activity (10 min)

Give ***laminated templates*** to the students with pictures of sets of more and less objects (similar to the ones given on page 6.) Let the students tick/ circle the sets with more objects with the markers. Have 5 to 6 templates in the class with different sets of pictures.

➢ Hot and Cold

Suggested Activities

Whole Class Activity (10 min)

Arrange 'Lemonade Day' in the school and let students enjoy chilled lemonade made with cold water. Similarly arrange a 'Soup Activity' some other day.

Small Group Activity (5 min)

Activity 1: Take two small sized towels. Dip one towel in hot water and the other in cold water. Wring water from both the towels and let students feel both towels one by one.

Activity 2: Make cards of different objects that are hot or cold. For example pictures of the Sun, hot coffee, soup, fire, iron etc. can be used for 'hot' and pictures of ice cream, ice cube, snow, snowman, juice etc. can be used for 'cold'. Let the students work in pairs to separate the cards of hot and cold objects.

Individual Activity (10 min)

Let students draw any hot and cold objects on paper.

Place two bottles one filled with hot water and the other with chilled water on a table. Ask a student to touch each bottle carefully, and tell what he/she feels by using the vocabulary 'hot' and 'cold'. Repeat the activity with other students.

Make ***laminated templates*** with pictures of hot and cold objects on it. Let students circle the hot objects and cross the cold objects with board markers.

Since these concepts are being reinforced, they can be covered in one lesson, either one by one or through an activity using correct vocabulary to distinguish few/ many, more/ less, and hot/ cold objects and asking students to repeat your words.

Lesson 1

Objective

By the end of this lesson, the students should be able to distinguish between a few objects and many objects, more and less, hot and cold.

Learning Curve

The students are already familiar with the words ‘few’ and ‘many’ and ‘more’ and ‘less’ objects. They have also learnt to distinguish between ‘hot’ and ‘cold’.

Learning Resources

Objects such as balls, fruits, pencils, books, and toy cars, etc. Hot water bottle, ice cubes, glass of juice, hot tea.

Note: Extra care should be taken for the safety of students while using hot and cold objects.

Learning Activity (20 min)

Place different objects on the table in groups, in such a way that some groups have a ‘few’ objects in number, while the others have ‘many’. Call the students one-by-one to identify groups of a few and many objects.

Repeat the same activity as done earlier with different objects, using the vocabulary ‘more’ and ‘less’ this time.

Repeat the same activity as done earlier with different objects and using correct vocabulary i.e. ‘hot’ and ‘cold’ this time.

Repeat this exercise with other available objects.

Textbook Practice Pages (20 min)

Page 5, 6, and 7

➢ Whole and Half

Suggested Activities

Whole Class Activity (5 min)

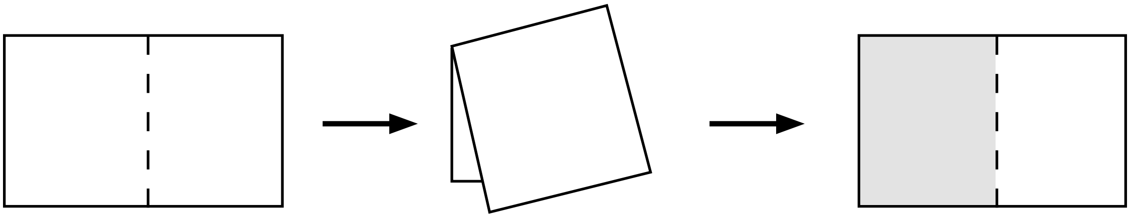
Circle Time – Show different real objects as a ‘whole’, such as apple, onion, chapatti/bread, burger, melon, cake etc. later cutting it into halves.

Small Group Activity (10 min)

Let students make a sphere from play dough. Provide plastic knives and let them cut the spheres in halves.

Individual Activity (5 min)

Give a square/ rectangle piece of paper to each student and let him/ her fold it in half



folding in half

Lesson 2: Whole and Half

Objective

By the end of this lesson, the students should be able to distinguish between whole and half figures and objects.

Learning Curve

The students may be familiar with whole and half of objects. Now they can have fun by dividing and folding a sheet of paper in half.

Learning Resources

Whole apple, half apple, any other object whole and half, shapes whole and half

Learning Activity (20 min)

Bring fruits and vegetables or any other available objects to class. Pick up one of the objects at a time and say 'whole' then cut it in half and say 'half'. Similarly, hold a sheet of paper and ask the students whether it is whole or half. Wait for their response, then fold the paper in half and ask again. What has happened? Tell them the paper has been divided in half. Fold and unfold the paper again and again, using the words whole and half. Ask the students to repeat the words with you.

Textbook Practice Pages (20 min)

Page 8 and 9

3 Lines

Suggested Activities

Whole Class Activity (15 min)

- Take the students for a walk outside the classroom. Let them observe the following in the playground and other areas in school:

  – Straight lines – Zigzag lines – Curved lines – Wavy lines

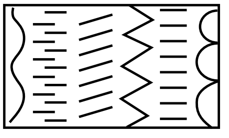
- Make straight, zigzag, curved, wavy, and spiral lines in the play area with chalk or paper tape. Let students observe these lines and walk on them.
- Bring lots of pictures with different lines and ask students to identify them. Show a mosquito coil, onion (inside), and pictures of spirals to the students to give them an idea of spiral lines.

Small Group Activity (10 min)

- Provide lots of pebbles or counters to the students. Let them make straight, zigzag, curved, wavy, and spiral lines with those pebbles/ counters.
- Provide playdough and string to the students to make different lines.

Individual Activity (10 min)

- Take old wedding/ invitation cards/ card sheets and draw straight, zigzag, curved, wavy, and spiral lines on them. Provide round edged scissors to the students to cut along these lines.



- Provide a few ice cream sticks and a piece of paper to each student. Let them make patterns of lines by pasting the ice cream sticks.
- Give newspaper, paint and brushes to the students and let them paint different type of lines on the newspaper.
- Prepare ***laminated sheets*** for tracing straight, zigzag, curved, wavy, and spiral lines with board markers.

Note: Since the topic of lines is reinforced at this stage, teachers can refer to lessons on pages 23–30 of the Starter. It is at the discretion of the teacher to cover the topic in many/ few lessons as required.

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Lesson 1

Objective

By the end of this lesson, the students should be able to improve their motor control by drawing patterns, and as a result, their handwriting improves which helps them in their later years.

Learning Curve

Colouring books at home have already provided the students enough opportunity for stroke-play. It is expected that, with a pencil firmly held in hand and the hand correctly poised, the muscle control improves motor control, which in turn develops into better hand-writing, and better strokes at drawing and colouring.

These pages show various drawing patterns associated with movements of animals in real-life (snakes, snails, and butterflies) and objects like ball, aeroplane, etc. Terms like straight, horizontal, vertical, wavy, curved, and spiral need to be used.

(Tips such as: **H**orizontal for Head-down, **V**ertical for Very tall, **W**avy like the waves, **C**rooked not straight, help students memorise the words.)

Note: Left-handed students must not be criticised or forcibly asked to switch to the right hand. Some of the greatest artists and the best brains were left-handed.

Learning Resources

The students may work with sand and sticks. Obviously, making castles with buckets is great fun. But, drawing a path between two castles is also challenging. The students may be encouraged to draw straight, curved, and crooked path or even try to connect them by loops.

Learning Activity (20 min)

Each student is given a shape made out of sand-paper, such as 8, O, I, 6, L, S, or W. They are asked to feel these shapes with the forefinger. They feel the straight line in the letter I, the curves in the letter S and O, the zig-zag in the letter W and the loops in 8.

8 O I W S

Try untying a full-blown balloon and then leaving it loose in the classroom. Allow the students to watch the path it takes!

Textbook Practice Pages (20 min)

Pages 10, 11, 12, 13, 14

Additional Work

The students stand in a line. A student makes the shape 'S' using his/her fingers on the back of the students in front of him/her who has to then guess the letter/ number written on his/her back. This student now writes 'I' or '0' on the back of the student in front of him/her and in this way the guessing game goes on.

They draw different strokes on a newspaper with crayons. All of these improve their motor control and handwriting.

More worksheets are prepared with different patterns such as circles and spirals. It must be remembered that, at this age, students will not be able to draw accurately and this must not be criticised.

Wrap up Activity

The teacher can make pattern strips and keep them in the activity corner for the students. Sand trays, slates, and water trays should also be made available for the students.

4 Numbers: Part One

Note: Students are already familiar with the numbers 1 to 10, i.e. they can count and write numbers up to 10. Young students require constant reinforcement, so that they are able to apply this knowledge throughout the day. Therefore, teachers need to revise counting and writing numbers at this stage too, before moving ahead with bigger numbers.

Numbers 1 – 10

Suggested Activities

Whole Class Activity (10 min)

- *Circle Time* – Ask students to bring one, two, three, or four… objects from the basket or objects within the classroom e.g. crayons, pencils, notebooks, counters etc.
- *Number Hunt* – Prepare flash cards (5" x 5") for each number that you want to introduce along with the quantity. For example, toys, balls, dolls, pencils etc. Hide these cards in different places in the classroom. During circle time, send a group of students to find the required cards. Once they find one card, count the pictures on the card with the students and point towards the number and call its name.
- Show random number cards from 1 to 10 to students during circle time and ask them to show the fingers of their hands according to the shown number.
- Take 10 ice cream sticks and write numbers from 1 to 10 (one on each stick.) Take another set of 10 sticks and draw pictures from 1 to 10 (one on each stick.) E.g. make circle/ hearts/ stars etc. Mix all the sticks and put them in a basket. Take the students in the playground and give 1 stick to each student. Ask them to find their partners. Once they all find their partners, ask them to stand according to the sequence from 1 to 10 in pairs (number and quantity.)

Small Group Activity (10 min)

- Make a washing line in the class and prepare number cards from 1 to 10. Ask the students 'which number comes first?', then peg number 1 on the washing line in front of them. Then ask them which number comes after 1. After their reply, peg number 2. Similarly, peg numbers up till the all numbers have been introduced. Mix all the number cards again and let students practice sequencing the numbers.

- Put some small objects in a feely bag e.g. buttons, counters, erasers, etc. Ask students to take out the required quantity from the bag. Make sure every student takes a turn.
- Write numbers on the floor with a chalk. Give instructions such as: jump on number 1, stand on number 6, touch number 10 etc. Let all students take turns.
- Provide students with disposable glasses. Label each glass with a number. Also provide the required quantity of counters/ beads to them. Ask them to put counters/ beads in the glasses according to the number written on the glass.
- *Heart Puzzle* – Take a red colour card sheet and cut out the required number of hearts of approximately 6" x 6". Cut each heart in half using a zigzag pattern. Then write a number on one side of the heart and draw the corresponding number of hearts on the other side of the heart. Now let the students find matching parts of the broken hearts.
- Prepare small size number cards and put them in a basket along with the required number of pegs. Give the basket to the students and ask them to peg the cards according to the numbers.

Individual Activity (5 min)

- Make a laminated template of hollow numbers on chart paper 12" × 8".
- Let students take turns to trace the number with a board marker.
- Give playdough to the students to make balls of the required number of quantity.
- Give 10 small, green cut-outs of circles to each student. Let the students paste these cut-outs on a sheet of paper to make a caterpillar. Also ask them to write the numbers from 1 to 10 (one on each circle.)

Lesson 1: Numbers 1 – 5

Objective

To reinforce counting and writing numbers and number names between 1 and 5.

Learning Curve

Stories about cavemen and the way they kept their records are very exciting for students. Charts of those times, if put up in the classroom, fascinate students a lot.

A lot of such data can be obtained from the internet.

They start by drawing as many lines as there are toys in the classroom cupboard or as many toothpicks as there are bits of bread kept on a plate. The students stick the toothpicks in the pieces of bread and discover the meaning of 'as many as'.

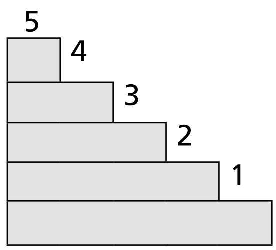
After various such activities showing 'one-to-one' association, the students start writing the numerals along with the corresponding number names. They also call out the name after writing it.

The shapes of numbers 1 to 5 have already been introduced to students along with their meaning. For example, 2 is one more than 1, 3 is one more than 2, and so on. This lays the foundation of the concept of addition and subtraction that is discussed later on in the book.

Not only do they learn the 'value' of numbers, but they also learn to associate 1 with one nose, 2 with two eyes, 5 with five fingers, etc. It is even possible for the students to recognise groups of 2, 3, 4, and 5 objects at a glance if enough practical work is carried out in the class.

Learning Resources

- An assortment of countable objects such as matchsticks, plastic cutlery, large buttons, bottle caps, dolls, plastic fruits and vegetables, and toy cars, etc., that students see in their everyday life.
- It is very useful to have groups of 1, 2, 3, 4, and 5 marbles or large wooden buttons sewn in little 'net' pouches. Students can see and feel the marbles and observe how they group together.
- A staircase is very useful for showing how numbers increase in value as students go up the stairs.
- The switch board indicating floors in a lift, with the numbers changing as the lift goes up or down, is an excellent way to show the meaning of 'going up' as we go from smaller to bigger numbers and 'going down' when we move in the reverse order.



- Charts with numerals 1 to 5 written in the centre, matching to the number of objects placed all around the number.
- 5 tables can be arranged in such a way that Table 1 has one of each object like 1 doll, 1 kite, 1 balloon, 1 book, 1 eraser, and so on, while Table 2 has two of each object such as 2 plastic spoons, 2 lunch boxes, and so on. Similarly Table 3, Table 4 and Table 5 can also be laid.
- Charts showing different groups of numbers for instant recognition.

Note: It would prove to be very productive if the teacher adheres to the following order during the lessons:

- First move from the actual physical example to picture
- Then move from the picture to 'picture and number'
- Finally move from 'picture and number' to number only

Learning Activity (20 min)

The teacher should carry out in the classroom the same activity of relating 'one-to-one' by placing as many sticks of chalk on the table as there are buttons on the clown's shirt or pencils in a pencil box.

This activity may be followed by writing the numerals on the board and an introductory discussion on the concept of 1 + 1, 2 + 1, etc. As students grow, it is important that they also learn simple addition of numbers.

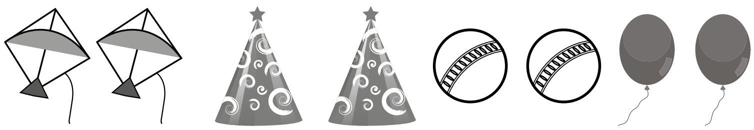
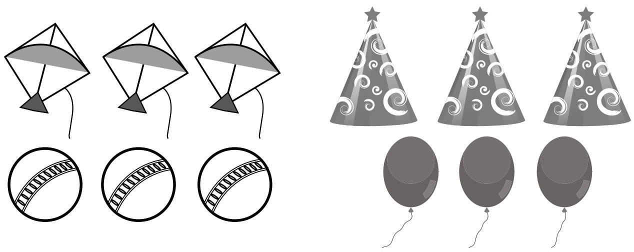
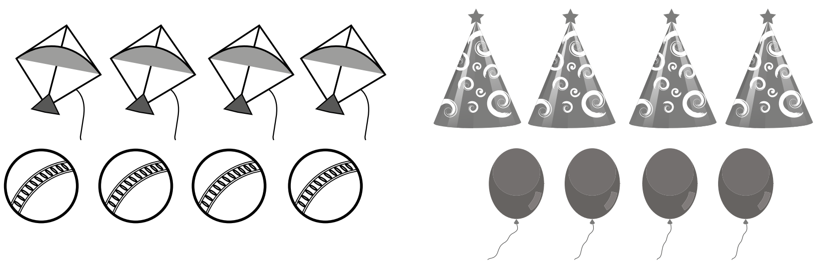
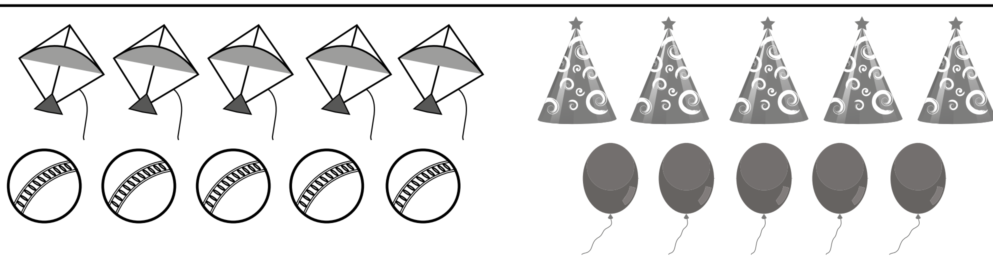
Textbook Practice Pages (20 min)

Pages 15 – 18

Note that pages 19 – 27 are an extension of the work done earlier, therefore, should be done in other periods as per need.

Additional Work

On sheets of old newspapers, students draw 1 kite, 2 balls, 3 balloons and so on. Number poetry is also fun to learn. Instant recognition of groups of 2, 3, 4, and 5 is very important.

Groups of 2	
Groups of 3	
Groups of 4	
Groups of 5	

Charts with pictures stuck on them in such formations help students visualise number patterns.

Wrap up Activity

The teacher can arrange a number development corner in the classroom. In it the following aids can be placed to assist the students further: Dice, Counters, Number books, and Number charts.

The teacher should ask the students to write the number in the air as well and she can devise rhymes to assist in the movement of hands.

The textbook pages reinforce the number sequence and thus must be accompanied by a great deal of practical work. Use of fingers, toes, and pictures on the soft board are very helpful.

The following poem can be recited in the class to enhance learning:

1 sun, 1 moon, 1 nose And 1 horn of a unicorn
2 hands, 2 eyes, 2 horns And 2 feet of birds that tweet.
3 legs of a tripod, 3 wheels of a tricycle, And 3 cheers for the 3 musketeers.
4 legs of a dog, 4 of a cat And 4 legs of the chair we sit on.
5 fingers, 5 toes, 5 vowels And 5 petal flowers in a garden

Lesson 2: Numbers 6 – 10

Objective

To reinforce counting and writing numbers and number names between 6 and 10.

Learning Curve

Although students have been working with numbers up to 5 but a rough concept of higher numbers already exists in their minds through various day-to-day observations, like listening to elders talking about time, counting their fingers, looking at chocolate squares in a chocolate bar and so on.

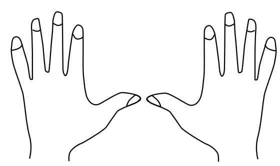
Association of the numerals with the objects, visual grouping and concept of 1 more, leads on to the numbers 6, 7, 8, and 9.

6 runs in a **sixer** in cricket, 6 legs of an insect, 7 days in a week, 8 legs of an octopus and a spider and so on.

The focus at this level is not only on single-digit numbers

up to 9, but also the number 10 has been introduced, by emphasising the concept of 0 as a 'place-holder'.

It may be explained that '10' is a symbol for 'ten' which is the number of fingers on two hands.



Learning Resources

Counting trees in a garden, counting toys, going up and down the stairs, the buttons in an elevator, etc., serve as great tools for teaching numbers up to 9 (or 10 without the introduction of place value).

Other learning resources can be: 10 pens in a packet, 10 chocolate squares in a bar and similar objects. Another similar set may be used with one item missing from each (for showing 9.)

Learning Activity (20 min)

Students work on the basis of '1 more' until they come to the number 9, as was done for the numbers from 1 to 5. The learning activity here is just an extension of earlier work. Use of fingers may be encouraged, before taking the students on to 'mental' addition and subtraction.

Textbook Practice Pages (20 min)

Pages 28 – 31

The pages in the book are also an extension of the work done earlier.

Additional Work

A hopscotch-type pattern can be created on the board as well as on sheets of paper on which students work with numbers from 1 to 9.

Students play a clapping game with numbers. They sit in a circle and speak out the numbers aloud, one by one. Every alternate student or every third student merely claps. He/she does not call out the number.

Textbook pages reinforce the number sequence in various practical ways. More activities like this are necessary in the classroom. A great deal of repetitive activity for writing numbers and number names is required to improve motor control, and hand-eye coordination.

Lesson 3

Objectives

To reinforce the number 10, and enable students to count and write the number 10.

Learning Curve

'1 more than 9', 10 fingers and 10 toes, and other similar concepts arise for students after working with numbers up to 9 in the earlier pages. These will be reinforced in the current pages leading to the introduction of 2-digit numbers.

Learning Resources

Strings with 10 beads, bundles of 10 matchsticks, packs of 10 pens, little 'net' packets containing colourful beads in groups of 1s, 2s, 3s, up to 10s, an abacus etc.

Learning Activity (20 min)

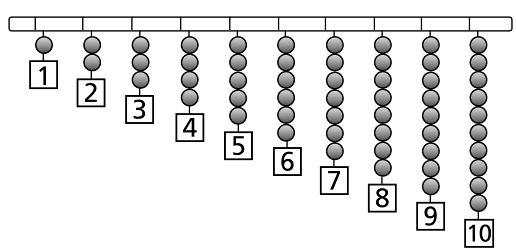
The concept of 10 can be taught easily by counting fingers and toes. It is important to reiterate that 10 is merely a number and is written as: **10.** A lot of practical work is necessary before the concept of 10 is reinforced with the written work given in the book.

In this activity, students string beads in groups of 10. They count the hanging beads along the rope. They may tie toothpicks or lollipops in groups of 10 or group objects together up to 9, and then add 1 more to make 10 and so on. The 'net' packets with beads are very useful to make groups of 10s in the manner shown below:

1 + 9 = 10

2 + 8 = 10

3 + 7 = 10 and so on.



Textbook Practice Pages (20 min)

Pages 32 – 35

The pages in the book are also an extension of the work done earlier. The concept of *before, after* and *between* (on page 34) can be taught by means of an interesting activity wherein two students stand in front of the class with two cards showing consecutive numbers such as 6 and 7. A third student is then asked to find the number that would come before these two numbers (i.e. 5) and another one is asked to find the number that would come after these two numbers (i.e. 8). Next, ask another pair of students to stand in front of the class with two cards showing numbers 3 and 5. Ask the students which number will come in between these two numbers (i.e. 4.)

The ladders given on page 35 in the textbook show that each bigger number is one step higher than the number below it. Here, the teacher can also talk about the buttons in the elevator. This eventually leads to 'ascending and descending orders'.

Additional Work

Students may be asked to segregate pages in their exercise books in groups of 10. They may also be asked to work with missing numbers and number sequences up to 9.

Net bags are very useful for grouping numbers as '5 + 1' or '5 + 2', and so on. Each of these net bags may be tied with different coloured ribbons. Students begin to associate 1 with red, 2 with blue, 3 with green, 4 with white, and 5 with black coloured ribbon. Then, 6 will have a black and a red ribbon. 7 will have a black and a blue ribbon, and so on. 10 will have 2 black ribbons (showing 5 + 5 = 10.)

Numbers 11 – 20

Suggested Activities

Whole Class Activity (10 min)

Hide the ***number cards*** from 1-20 in different places in the classroom. Divide the class into two groups. Call any number, e.g. 12 and let one student from each group find that number in the class. Whichever group gets the ***number card*** first will keep that card. Keep calling the numbers until all 20 numbers are finished. The group that collects more cards will be the winner.

Small Group Activity (10 min)

Take 20 ice cream sticks and write numbers from 1 to 20 (one on each stick). Take another set of 20 sticks and draw pictures from 1 to 20 (one on each stick), e.g. make circle/ hearts/ stars etc. Make 4 sets of these sticks. e.g.

Set 1: Number and quantity sticks – 1, 3, 8, 15, 20,

Set 2: Number and quantity sticks – 2, 7, 10, 14, 19

Set 3: Number and quantity sticks – 4, 9, 12, 16, 18

Set 4: Number and quantity sticks – 5, 6, 11, 13, 17

Put each set in a basket and then divide the class into 4 groups. Give one set to each group to match the number with the quantity.

Individual Activity (10 min)

Provide ***laminated template*** to write numbers from 11 to 20.

Lesson 4

Objectives

By the end of this lesson, the students should be able to count and write numbers 11-20,

Learning Curve

Students have already learnt to write numbers up to 10, they can now learn to count upwards from 11 to 20.

Numbers up to 20 are merely an extension of the number sequence from 1 to 10. Visually, students recognise '10 + 1' and '10 + 2' as 11 and 12 respectively. And they know these numbers by their names as 'eleven', twelve', 'thirteen' and so on.

The teacher points out that these numbers are associated with earlier numbers as follows: '**tw**elve' is to '**tw**o': 2 + 10

'**th**irteen' is to '**thr**ee': 3 + 10

'**four**teen' is to '**four**': 4 + 10, etc.

Learning Resources

- Number line from 1 to 20 on the floor and on the blackboard
- Number lines from 1 to 20 for each student
- Net bags, each containing 10 stones, and some loose stones
- Strings, each with 10 beads, and some loose beads
- Packets, each with 10 pencils, and some loose pencils
- Packets, each with 10 buttons, and some loose buttons
- Coloured beads, small trays, thread

Learning Activity (20 min)

Step 1. Count out 10 beads and string them on the thread. The students should count with you.

Step 2. Next, take a single bead out of the container and place it next to the string. Ask the students to count the beads.

Step 3. Introduce the concept that one more than ten is eleven.

Step 4. Trace the number 11 in the air by following the number written on page 36.

Step 5. In a similar manner, teach the numbers up to 20.

The concept of *before, after* and *between* can be taught by means of an interesting activity wherein two students stand in front of the class with two cards showing consecutive numbers such as 17 and 18. A third student is then asked to find the number that would come before these two numbers (i.e. 16) and another one is asked to find

the number that would come after these two numbers (i.e. 19). Next, ask another pair of students to stand in front of the class with two cards showing numbers 12 and 14. Ask the students which number will come in between these two numbers (i.e. 13.)

Textbook Practice Pages (15 min)

Pages 36 – 40

Wrap up Activity (5 min)

Place 10 trays on the table and ask the students to take out beads from the container and place them in the trays. Each tray should have a different number of beads from 11 to 20. You can assign each student a specific number of beads to place in his/her tray, e.g. one student may be required to place 14 beads in his/her tray while another may be asked to place 17 beads in his/her tray.

Note: The students have already been introduced to skills required for addition of smaller numbers. On similar lines, they learn to add numbers up to 20, at first with objects listed above, then on the number line, and finally on paper.

5 Shapes: Part One

Suggested Activities

Whole Class Activity (10 min)

Circle Time:

- Show different **cube** shaped objects (e.g. Rubik's Cube, dice, a cube shape block, cube shaped box etc.) Ask them to focus on the shape of all objects. Pass on the objects one by one to each student and let them explore the shape.
- Tell the students to stand in a circle, and let them play with a **spherical** beach ball. Ask them to roll the ball to each other across the circle for more fun. Each time a student gets the ball, ask him/her what the shape of the ball is.
- Display a **conical** party hat in the centre of the circle. Sing a song and as you sing, the students can pass the hat around the circle singing along with you. When you stop, the student holding the hat gets to wear it and name the shape.
- Set up a play area as a supermarket and collect several **cuboid** shaped boxes e.g. cereal boxes, tissue paper boxes, toothpaste boxes, perfume boxes, etc. Let the students identify the shape cuboid in the supermarket.
- Write a note in students' diaries, requesting parents to send a boiled egg for lunch, a day before you teach this shape. Discuss the **ovoid** shape of the egg and let students enjoy eating it.
- Ask students to bring any **cylindrical** shaped object from their homes e.g. empty bottle, jam/ mayonnaise jar, any toy etc. and talk about that object and its shape during circle time.

Small Group Activity (10 min)

- Let students play 'snakes and ladders' using a dice. Keep repeating and asking the shape of the dice (cube.)
- Collect different types of balls and other spherical objects, hide them in the classroom/ play area. Make two teams and ask the students to find the hidden spherical objects. The team who finds more objects will be the winner.
- Popcorn Party - Make newspaper cones and help students decorate them by painting/ colouring. Put some popcorn inside the cones and let students enjoy a popcorn party.

- Divide the class into small groups. Give them objects shaped like a cuboid, ovoid, and a cylinder. Let students sort out all shapes, and make a list of how many objects of each type they have.

Individual Activity (5 min)

- Prepare a feely bag with a few miniature objects in it of all the shapes taught. Call one student at a time and tell him/her to find the 'cube' by feeling it. Repeat the activity with different shapes.
- Provide playdough to the students to make spheres, cones, cuboids, ovoids, and cylinders of different sizes.
- Tell students to draw and colour these shapes.
- Prepare 'nets' of different shapes and give them to the students, to form a shape by using glue to paste the sides.

Lesson 1

Objective

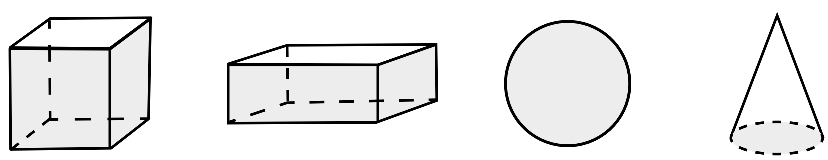
By the end of this lesson, the students should be able to identify and name solid shapes – cube, ovoid, and cylinder.

Learning Curve

Students can recognise solid shapes which they hold in their hands in everyday life such as balls, tins, dice, and cones. They will now look for other shapes such as bricks, eggs, cylindrical glass in everyday use.

Learning Resources

- Wooden blocks of all the solid shapes that are readily available such as balls, tins, dice, bricks, and cones are of great use.
- 'Feely bag' (a strong cloth bag) is a good resource to use.
- Water colours, paint brush, and old newspapers can also be used for colouring the shapes.



Learning Activity (20 min)

Students close their eyes, hold the wooden blocks in their hands and guess the shape merely by feeling. One of the all-time great activities is to paint each face of a solid (say, a cube) in different colours, and stamp each face on an old sheet of newspaper. For example, the first 'stamp' is red. This stamping is repeated with different colours (blue, green, black, yellow, and orange) on each of the 6 faces. Students discover that a cube has 6 faces because they used 6 different colours.

Students can also draw different patterns on the surfaces for fun and work out the numbers of faces, and so on.

Students work with balls, cans, and cones. They find that a ball has one round face. A can has two flat circular faces. The curved face can be flattened to form a rectangle. A cone has one circular face and one curved face, which can be flattened to look like a part of a circle.

Textbook Practice Pages (15 min)

Pages 41, 42, 43

Various shapes are referred to as 'faces' (rather than surfaces) and have amusing expressions (all sad or angry though) drawn on them. As a result, the lesson becomes 'play', rather than 'study'.

Additional Work

The students may be asked to search in the playground for solid shapes studied in these pages. The work at this level is pre-primary and should aim to concentrate on improving the spatial skills, recognition of various flat shapes and their association with the solid shapes to make a link between 2D and 3D shapes.

Wrap up Activity (5 min)

Collect objects of the shapes introduced i.e. cube, sphere, cone, ovoid, cuboid, and cylinder. Put these shapes in different places in the classroom. Keep at least 2 to 3 objects of one shape. Give a small bag/ basket to the students and ask them to collect any 2 or 3 shapes of their choice in their bag/ basket, then show it to the class and tell the name of each shape.

6 Patterns

Suggested Activities

Whole Class Activity (5 min)

Circle Time – Take different coloured crayons and make patterns in front of the students. E.g. keep 2 red crayons on the mat and then 1 green crayon, repeat the same combination again and then ask students what colour will come next. Do the same activity using blocks. Afterwards keep two blocks, 3 crayons etc. and increase the challenge for the students.

Small Group Activity (10 min)

Give lots of ***counters***, block, shells, beads etc. to the students and let them create their own patterns.

Individual Activity (5 min)

Provide ***laminated templates*** to the students and let them complete the patterns with board markers.

Lesson 1

Objective

By the end of this lesson, the students should be able to recognise and complete patterns.

Learning Curve

Students are already familiar with patterns, therefore now they can easily identify and make their own patterns.

Learning Activity (20 min)

Refer to lesson 1 and 2 of Starter on pages 48–49 for planning this lesson.

Textbook Practice Pages (20 min)

Page 44

7 Number: Part Two

Suggested Activities

- **Numbers 21 – 30**

Whole Class Activity (10 min)

Circle Time – Hide ***number cards*** from 21 to 30 in the classroom in different places. Send 2 to 3 students at a time to find a number, bring the card to the circle and tell the rest of the students which number they have found.

Small Group Activity (10 min)

Provide ***number cards*** to the students from 21 to 30. Let them arrange these cards in a sequence.

Individual Activity (10 min)

Provide ***laminated templates*** to the students to practice writing numbers from 21 to 30 using board markers.

- **Missing Numbers**

Whole Class Activity (5 min)

Prepare a number chart of numbers from 1 to 30 and display it in the class. Make students read that chart on a daily basis. When you intend to introduce the concept of missing numbers, cover up some numbers on the number chart e.g. 4, 7, 9, 12, 15, 18, 20, 23, 26, 29, etc., before the students arrive in the classroom. Draw their attention towards the chart and ask them about the missing numbers while they read the chart. Remove the cover and let them check if they are right or not.

Small Group Activity (10 min)

Give ***number cards*** from 1 to 10, 1 to 20, and 1 to 30 to the students (depending upon the mastery of students on number sequencing.) Hide a few numbers with you and tell the students that there are a few numbers missing from these numbers. Let them arrange the numbers in sequence and ask them to find and report which numbers are missing. Give them the hidden cards and ask them to complete the sequence.

Individual Activity (10 min)

Provide laminated templates to the students and let them write the missing numbers with board markers. Refer to pages 49 and 50.

➢ Number Before, After and Between

Whole Class Activity (10 min)

Chit Game – Prepare 29 chits with any one number from 1 to 29 written on each chit. Fold all 29 chits and put them in a basket. Let students sit in a circle and sing a song. As you sing, the students can pass the basket around the circle as they sing along with you. When you stop, the student holding the basket will pick up a chit, open it and let others know which number is written on the chit. The teacher will now ask the same student to tell which number comes before/ after.

Note: Same game can be played for 'between numbers'. Different chits are to be prepared for it. For example, 22 ___ 24 etc.

Small Group Activity (10 min)

Let students practice before, after and between numbers by playing the 'Chit Game' in small groups.

Individual Activity (5 min)

Provide laminated templates to the students and let them write before, after and between numbers with board markers. Refer to page 51 for making the laminated template.

Lesson 1

Objective

By the end of this lesson, the students should be able to recognise and write the numbers 21-30.

Learning Curve

Students have already learnt to count up to 20. They can now learn to count upwards from 21 to 30.

Learning Resources

Seashells, beads, counters and small trays

Learning Activity (20 min)

Step 1. Count out 20 counters and place them in groups of 10 (in two rows) on a tray. Label the tray 'Number 20'. The students should count along as well.

Step 2. Next, take a single counter out of the container and place it next to theses 20 counters. Ask the students to count the counters.

Step 3. Introduce the concept that one more than twenty is twenty-one.

Step 4. Trace the number 21 in the air by following the number written on page 47.

Step 5. In a similar manner, teach the numbers up to 30.

Place 10 trays on the table and ask the students to take out shells from the container and place them in the trays. Each tray should have a different number of shells from 21 to 30. You can assign each student a specific number of shells to place in his/her tray. For example, student A may be required to place 23 shells in his/her tray while student B may be asked to place 25 beads in his/her tray.

Refer to page 49 to 51 for writing missing numbers and number that comes before or after a number, or between two numbers.

Textbook Practice Pages (20 min)

Pages 45 – 48

Pages 49 to 51 should be done in separate periods as per requirement.

8 Addition

Suggested Activities

➢ **One More**

Whole Class Activity (10 min)

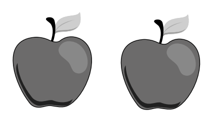
Jump on numbers – Take students to the school playground, write numbers from 1 to 9 with chalk (clearly visible) on the floor in jumbled form. Keep a score board. Divide students into two groups and call one student from each group at a time. Call a number and tell the student to jump on the number which is 1 more than the called out number. For example, call out 8 and ask one of the students to jump on a number which is 1 more than 8. If he/she jumps correctly give a smiley to the group on the score board. Now call a student from the other group. Repeat the process with all students of both the groups. The group getting more smileys will be the winner.

Small Group Activity (10 min)

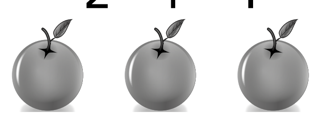
Provide some ***counters*** to the students along with a few ***number cards*** e.g. 2, 6, 4, 3, etc. Tell them to place the same number of ***counters*** on the mat as given on the number card. Once they make the quantity the same, ask them to add 'one more' to each set.

Individual Activity (10 min)

Give a ***laminated template*** with pictures of 2 apples, 3 oranges, 1 ball etc. drawn on it, along with numbers written below the object as shown. Also leave some space to draw one more object. Let students draw one more with a board marker and write the answer after adding one more.



2 + 1 =



3 + 1 =



1 + 1 =

➢ Addition with Zero

Whole Class Activity (10 min)

Circle Time – Reinforce the concept of zero. Put two disposable glasses on a table and tell the students that we will add all numbers from 0 to 9 today. Put 1 ***counter*** in one glass and don't put any counter in the other. Tell the students that as we have to add a zero, and zero means nothing, therefore, we won't put any counter in the other glass. Keep on adding counters in the first glass up till 9, making the students realise that when a zero is added to a number, the answer does not change.

Small Group Activity (10 min)

Let students practice adding numbers with zero using addition activity, as demonstrated in circle time.

Individual Activity (10 min)

Provide ***laminated templates*** to the students and let them add numbers from 1 to 9 with zero on it with board markers.

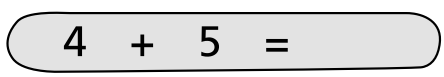
➢ Addition of Numbers 0 – 9

Whole Class Activity (10 min)

Circle Time – Make two big cardboard dice to play the dice game. Let a student throw one dice and let another throw the second dice. Ask another student to call out the number of dots that he/she sees on top of the dice, and then tell how many dots altogether. Continue the game by calling out three students together.

Small Group Activity (10 min)

Prepare some addition sums on ice cream sticks (refer to the picture) and demonstrate the activity. Pick up one ice cream stick and read the sum written on it (e.g. 4 + 5 =) Next, place four ***counters*** on the table then place five more ***counters*** next to them. Now, ask 'how many ***counters*** altogether?' Let the students count with you. Distribute the ice cream sticks and ***counters*** among the groups and let them perform the same activity.



Individual Activity (10 min)

Give a few ice cream sticks to each student without addition sums written on them. Ask the students to make their own sums on these ice cream sticks and give it to their partner to solve. Peer checking can also be done.

Lesson 1

Objective

By the end of this lesson, the students should be able to add numbers 0 to 9.

Learning Curve

Students learnt addition of numbers up to 5 by knowing 'what is 1 more than a number'. By explaining the number sequence as '2 is 1 more than 1', '3 is 1 more than 2' and so on, addition is introduced in a practical manner. A great deal of practical work in the garden or in the classroom is necessary for this.

The students also learn to write the addition symbol, + (pronounced as plus) and the equality sign, = (pronounced as 'equal to'.) It is important that they learn where to place these symbols.

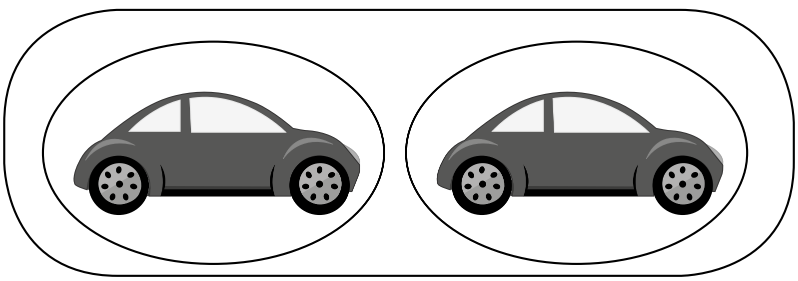
Learning Resources

- Pieces of rope for making loops of various sizes.
- Assorted objects from everyday life, like small dolls, candies/sweets, toy cars, trains, helicopters, paper flowers, and stationery objects, etc.
- Ice cream sticks for symbols of + and =.

Learning Activity (20 min)

Hold a basket in your hand and tell a student to put a pencil in it. Say, 'there is 1 pencil in the basket.' Another student puts 1 more pencil in the same basket. Thus, when 1 more pencil is added to the basket that already contains 1 pencil, there would now be two pencils (i.e. 1 + 1 = 2) in it.

Similarly, 2 pencils when added to 1 give 3 pencils. Ask each student to repeat the same activity up to 5.



Next, make two loops with ropes on a table. Place a toy car in one loop and another toy car in the second loop. Now, place a bigger loop around both these small loops, and ask 'How many cars altogether in the big loop?'

Note: Do not use the (+ and =) symbols inside the loops.

More such activities can be carried out on the board with loops drawn and stars or smileys drawn inside the loops to display addition.

The students learn about the addition symbol (**+**) as well as the 'equal to' (=) sign and where to place them when the teacher writes the addition statements separately.

More photocopied addition pages for numbers up to 9 must be given to students to work on.

Textbook Practice Pages (20 min)

Pages 53 to 57

Pages 58 to 63 should be done in separate periods as per requirement.

Additional Work

Continuous practice in addition needs to be given to students with fingers, bars of chocolate or anything else that is a part of their everyday life. The students MUST know by heart, simple facts such as:

1 + 1 = 2

2 + 2 = 4

1 + 2 = 2 + 1 = 3

1 + 3 = 3 + 1 = 4

1 + 4 = 4 + 1 = 5

2 + 3 = 3 + 2 = 5

9 Subtraction

Suggested Activities

➢ One Less

Whole Class Activity (10 min)

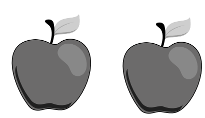
Jump on numbers – Take students to the school playground, write numbers from 1 to 9 with chalk (clearly visible) on the floor in a jumbled form. Keep a score board. Divide students into two groups and call one student from each group at a time. Call a number and tell the student to jump on the number which is 1 less than the called out number. For example, call out 6 and ask one of the students to jump on a number which is 1 less than 6. If he/she jumps correctly give a smiley to the group on the score board. Now call a student from the other group. Repeat the process with all other students in both the groups. The group getting more smileys will be the winner.

Small Group Activity (10 min)

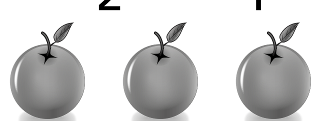
Provide some ***counters*** to the students along with a few ***number cards*** e.g. 5, 6, 9, 3 etc. Tell them to place the same number of ***counters*** on the mat as given on the number card. Once they make the quantity the same, ask them to subtract, making each set 'one less'.

Individual Activity (10 min)

Give a ***laminated template*** with pictures of 3 apples, 5 oranges, 1 ball etc. drawn on it, along with numbers written below the object as shown. Let students cross-out' one object with a board marker, count and write the remaining as an answer after subtracting one.



2 – 1 =



3 – 1 =



1 – 1 =

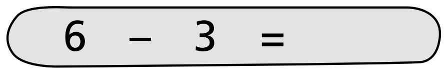
➢ Subtraction of Numbers 0 – 9

Whole Class Activity (10 min)

Circle Time – Make two big cardboard dice to play dice game. Let a student throw one dice and let the other throw the second dice. Ask another student to call out the number of dots that he/she sees on top of the dice, and then tell him/her to take away the smaller number from the bigger number. Continue the game by calling out three students together.

Small Group Activity (10 min)

Prepare some subtraction sums on ice cream sticks (refer to the picture) and demonstrate the activity. Pick up one ice cream stick and read the sum written on it (e.g. 6 – 3 =). Next, place six ***counters*** on the table, then take away three ***counters***. Now, ask 'how many ***counters*** are left?' Let the students count with you. Distribute the ice cream sticks and ***counters*** among the groups and let them perform the same activity.



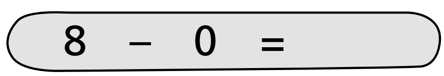
Individual Activity (10 min)

Give a few ice cream sticks to each student without subtraction sums written on them. Ask the students to make their own sums on these ice cream sticks and give it to their partner to solve. Peer checking can also be done.

➢ Concept of Zero

Whole Class Activity (5 min)

Circle Time – Play the *'Zero Game'* with the students. Let children sit in a circle and give a few ***counters*** to each student (you can use multiple objects like crayons, shells, beads, etc.) Ask any one student to count his/her ***counters*** and tell you the number. Ask her/him to give you 2 ***counters*** and then count how many are left. Repeat the same procedure with a few other numbers and then ask a student to give you 0 counter. Tell them that zero means nothing, so I won't be getting any ***counter*** this time. Repeat the game by asking for the 0 ***counter*** after every two, three turns, until all the students have participated in the game.



Small Group Activity (10 min)

Prepare subtraction sums on ice cream sticks showing subtraction of 'zero' from numbers 1 to 9 (refer to the picture.) Give these ice cream sticks to the group along with the basket of ***counters***. Let the students pick up an ice cream stick, read a sum (e.g. 8 – 0 =) and keep the required number of counters in front of the stick. Encourage them to solve all the given sums and show it to you.

Individual Activity (10 min)

Give a few ice cream sticks to each student without subtraction sums written on them. Ask the students to make their own sums on these ice cream sticks and give it to their partner to solve. Peer checking can also be done.

Lesson 1

Objective

By the end of this lesson, the students should be able to subtract by practically 'taking away' up to 5 objects.

Learning Curve

Through addition, learnt in the previous unit, students automatically get an idea of 'more than' and 'less than' and consequently the concept of 'taking away' becomes intuitive.

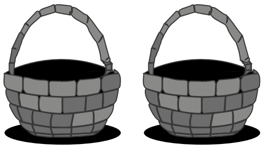
Subtraction becomes easy to grasp for students with the use of practical examples like: 'I had 4 sandwiches, my friend took away 2'; 'I had 3 chocolates, I gave 1 to my sister' and so on. Students enjoy learning by 'doing' and 'discovering' facts on their own. These pages introduce subtraction in a practical manner.

The students learn about the subtraction symbol (–) as well as the 'equal to' (=) sign and where to place them when the teacher writes the subtraction statements separately.

More photocopied subtraction pages for numbers up to 5 must be given to students to work on.

Learning Resources

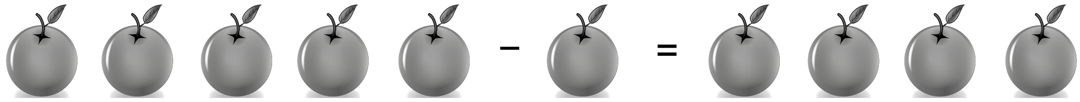
It is useful to have baskets of plastic vegetables and fruit. Each basket contains 5 oranges or 5 onions, but any other objects from real-life, as used in earlier pages for addition, will do just as well.



Learning Activity (20 min)

Children may have observed a fruit vendor selling fruit. If possible, ask a fruit vendor to come to school with small baskets of fruit and let students observe how he sells the fruit (by numbers.)

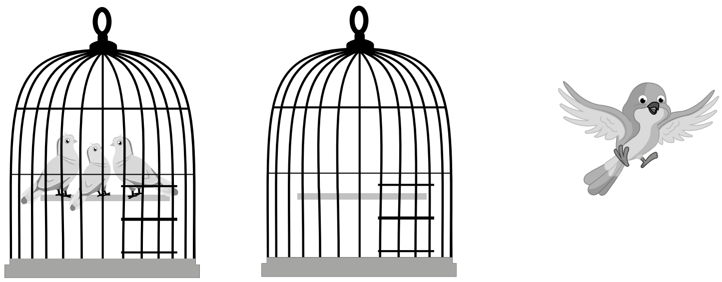
Later, let one student play the role of a fruit vendor having four fruit baskets. Let each basket contain fruits like oranges, bananas, guavas, mangoes, etc.5 each. All the other students visit the shop to buy fruit. One of the students' posing as a customer buys 1 orange. The shopkeeper gives him/her 1 orange and counts the number of fruit left in the basket. He/she counts and says, "5, take away 1, leaves 4." The teacher writes '5 – 1 = 4' introducing the sign of subtraction and equality.



Another student buys 2 mangoes and the shopkeeper says, “I have 3 mangoes left,” and the teacher writes on the board: 5 – 2 3. Repeat the activity with other numbers.



Subtraction leads to the concept of ‘0’.
Bobo the Bunny had 4 carrots and it ate all of them, so it has 0 carrots left.
Two birds in a cage, both fly away, one by one, so there are 0 birds left. Zero (0) merely stands for NOTHING.



Textbook Practice Pages (20 min)

After having worked practically and seen the teacher write the symbols on the blackboard, working on the subtraction pages in the book becomes very easy.

Pages 65, 66, 67,

Pages 68 to 74 should be done in separate periods as per requirement.

Additional Work

Circulate more worksheets with horizontally set subtraction sums having illustrations showing actual ‘take away.’

Remember

It is essential to show subtraction practically as ‘taken away’ and to show the same on a sheet of paper by means of ‘crossed-out’ objects.

The teacher may also introduce the words, ‘few’ or ‘less’ at this stage by framing sentences like:

‘Rashida had 3 buns. She ate 1. She has fewer buns now.’ (Students often say ‘less’ which is all right, at this level.)

More or *Less* comparisons should always be done in a practical manner.

Take 2 sets of pebbles—one with 3 pebbles and the other with 5 pebbles (you may also take vases with flowers or jars with toffees.) Students match one to one from each set. The set, which has some pebbles left, has more, and the set, which has none left, has fewer or less. (Visual recognition of number groups is very useful here.)

10 Shapes: Part Two

Suggested Activities

➢ **Square**

Whole Class Activity (10 min)

Make a big square on the floor with paper tape. Let students find square-shaped objects in the classroom and put them inside the big square drawn on the floor.

Small Group Activity (10 min)

Make a big square on a chart paper with a marker. Also make lots of small size cut-outs of squares, triangles and circles with newspaper and keep them in a basket. Let students sort out squares from the basket and paste them on the big square drawn on the chart paper.

Individual Activity (10 min)

Provide 4 ice cream sticks to each student along with a sheet of paper. Guide them to make squares using these 4 sticks by pasting them on the paper.

➢ **Rectangle**

Whole Class Activity (10 min)

Involve the whole class by asking them to identify rectangular shapes in the classroom. For example, students may point at the table, book, window, door, etc.

Small Group Activity (10 min)

Rectangle Mural Activity: Cut rectangles of various sizes out of coloured wrapping paper. Give the rectangles to the students and let them make a collage mural by pasting the shapes onto a rectangular piece of chart paper.

Individual Activity (10 min)

Ask the students to bring their family pictures. Provide two long and two short ice cream sticks to the students and let them make a photo frame for their family pictures.

- **Triangle**

Whole Class Activity (10 min)

Sandwich Making Activity — Involve students in a sandwich making activity. Tell them that when we cut a square diagonally we get two triangles. You can also ask them to bring triangular sandwiches or any other triangular edible item in their lunch box.

Small Group Activity (10 min)

Make a big triangle on a chart paper with a marker. Use the cut-outs of squares, triangles and circles made earlier with newspaper and keep them in a basket. Let students sort out triangles from the basket and paste them on the big triangle drawn on the chart paper.

Individual Activity (10 min)

Provide 3 ice cream sticks to the students to make a triangle.

- **Circle**

Whole Class Activity (5 min)

Make a few cut-outs of circles and hide them in different places around the classroom. Send a group of 3 to 4 students to find a circle. Once they bring it, send another group of students and so on.

Small Group Activity (10 min)

Give a sheet of paper with a big circle drawn on it. Let students print circles using paper cups dipped in paint.

Individual Activity (10 min)

Give cut-outs of squares, rectangles, triangles, and circles. Encourage them to make a clown/ house/ scenery using these shapes. Provide some samples to follow.

- **Pentagon**

Whole Class Activity (5 min)

Pentagon Time — Make a big pentagon in the class with paper tape, let students sit inside it and do any activity and enjoy pentagon time instead of circle time.

Small Group Activity (10 min)

Pentagon Mural Activity: Cut pentagons of various sizes out of coloured wrapping paper. Give the pentagons to the students and let them make a collage mural by gluing the shapes onto a pentagonal piece of chart paper.

Individual Activity (10 min)

Provide cut-outs of pentagons to the students and let them draw and colour any designs/ patterns in it.

- **Hexagon**

Whole Class Activity (5 min)

Shape Riddles game: Create and ask riddles for all shapes:

I have no sides and no corners, what am I?	(Circle)
I have three sides and three corners, what am I?	(Triangle)
I have four equal sides, what am I?	(Square)
I have two short and two long sides, who am I?	(Rectangle)

Small Group Activity (10 min)

Provide small cut-outs of all introduced shapes to the students. Let them create their own patterns by pasting these shapes on a card sheet.

Individual Activity (10 min)

Provide cut-outs of hexagons to the students and let them draw and colour any designs/ patterns in it.

Lesson 1

Objective

By the end of this lesson, the students should be able to recognise different 2-dimensional shapes.

Learning Curve

Students have already learnt about simple 2D shapes i.e. square, rectangle, triangle, and circle in the previous class, here two new shapes pentagon, hexagon will be introduced.

Learning Resources

Cut-outs of squares, rectangles, triangles, circles, pentagons, and hexagons

Learning Activity (20 min)

Show a cut-out of a pentagon and explain that a pentagon is a flat shape. Let the students count the sides with you to discover that a pentagon has five sides. Then show that all the five sides are equal. Repeat the activity for a hexagon.

Now, ask a riddle:

I have five equal sides, what am I?	(Pentagon)
I have six equal sides, what am I?	(Hexagon)

Textbook Practice Pages (20 min)

Pages 75, 76, 77

11 Time

Suggested Activities

➢ All Around the Day

Whole Class Activity (5 min)

Take a big cut-out of a circle and divide it into eight sections with a pencil. In each section write the name of an activity that students are involved in during school hours. If available, you can also draw or paste a picture of each activity. For example, 'Assembly Time', 'Circle Time', 'Writing Time', 'Reading Time', 'Activity Time', 'Snack Time', 'Play Time' and 'Home Time'. Make a movable hand like a wall clock, attached from the centre of the circle. Introduce this clock to the students and tell them about different times of the day. Let them move the hand on the picture as and when they do a particular activity.

Small Group Activity (10 min)

Give students pictures of different activities of the day. e.g. waking up, eating breakfast, going to school, taking lunch, watching TV, playing, eating dinner etc. Let them arrange these pictures in a sequence according to their daily routine.

Individual Activity (10 min)

Let students draw the picture of their favourite time of the day.

➢ Reading Time

Whole Class Activity (10 min)

Circle Time – Bring a wall clock and discus the hour and minute hands and what the 12 numbers on the clock represent, to introduce 'o'clock' time.

Small Group Activity (10 min)

Give a clock to the students and let them practice reading o'clock time.

Individual Activity (10 min)

Make two different types of ***laminated templates*** of a clock.

Let students write the time in one and draw the hands in the other one, with a board marker.

- **Calendar**

Whole Class Activity (1 min)

Make a calendar on a full card sheet with days of the week written on it (refer to the picture.) Don't write the names of the months and dates, cover it with plastic sheet and display it at some visible place in the classroom. Make small cut-outs using a card sheet and write the names of months and dates (1 to 31) separately. Talk about the date every morning and make it a routine to let students paste months on a monthly basis and dates on a daily basis.

February						
Monday	**Tuesday**	**Wednesday**	**Thursday**	**Friday**	**Saturday**	**Sunday**
1						

Small Group Activity (5 min)

Prepare flash cards of days of the week and months of the year. Let students sequence them.

Individual Activity (5 min)

Let students practice sequencing days of the week and months of the year independently.

Lesson 1

Objective

By the end of this lesson, the students should be able to read and write o'clock time.

Learning Curve

Students have already learnt to differentiate between day and night. Now they will learn about the activities we do during afternoon and evening time.

Learning Resources

Pictures of activities we do in the morning, afternoon, evening, and night.

Learning Activity (20 min)

Ask the students to look at the picture given on page 78. Ask them what they notice. Then ask what do they do in the morning, afternoon, evening, and night.

Textbook Practice Pages (20 min)

Pages 80, 81

Pages 82, 83 on calendar should be done in a separate period.

12 Comparison: Part Two

Suggested Activities

- **Big and Small**

Whole Class Activity (10 min)

Take students for a walk around the school and let them observe different big and small objects in the surroundings.

Small Group Activity (10 min)

Collect different big and small objects in a basket. Give this basket to the students and ask them to separate big and small objects.

Individual Activity (10 min)

Take sheets of papers (depending on the number of students in your class). Using poster paints to make your hand impression on each one of them. Then hand over this paper to each student and ask them to make their hand impression next to it and let them observe the difference in the size of hand spans.

- **Fat and Thin**

Whole Class Activity (10 min)

Circle Time – Tell the story of 'A Big Fat Hen' to the students in circle time.

Small Group Activity (5 min)

Prepare some flash cards of fat and thin animals/ boys/ girls etc. and let students sort flash cards of fat and thin animals/ boys/ girls etc.

Individual Activity (10 min)

Give a ***laminated template*** to each student and ask them to draw fat and thin objects.

- **Long and Short**

Whole Class Activity (5 min)

Circle Time – Show pictures of a few animals with tails and ask which animal has a 'long' tail and which one has a 'short' tail. Collect pictures of some more animals and cut out

their tails. Paste these pictures on the board and call students one by one, hand over the cut-outs of tails to match them with the animals and say loudly, 'This Monkey has a long tail' or 'This Dog has a short tail.'

Small Group Activity (5 min)

- Provide different long and short objects to the students and let them compare these objects according to their length.
- Provide the flash cards used in circle time for the matching activity.

Individual Activity (5 min)

Let students make long and short lines on the newspaper with paint.

➢ Tall and Short

Whole Class Activity (5 min)

Circle Time – Encourage students to compare their heights with friends.

Bring a measuring tape to class, measure the heights of each student and compare heights of different students.

Small Group Activity (5 min)

Divide students into pairs. Instruct one student in each pair to build a tall tower and the other to make a short tower using blocks. Let students compare the sizes of the towers.

Individual Activity (10 min)

Encourage students to paint tall and short trees using crayons or poster paints.

➢ Light and Heavy

Whole Class Activity (10 min)

- *Circle Time* – Take a transparent glass bowl and fill it up with water. Collect some heavy and light objects e.g. a nail, an eraser, a crayon, a piece of chalk, a piece of wood, a feather etc. One by one, put these objects in the bowl filled with water and let students observe which object sinks and which floats. Tell them that heavy objects sink in the water while light objects float.
- Bring a weighing scale and a few fruit/ vegetables to class. Weigh two objects and compare their weight. Different objects available in class, such as books, stationery items, lunch box etc. can also be used.

Small Group Activity (10 min)

Blowing Activity - Place several objects in the middle of the table such as cotton, pins, leaves, paper, book, pencil etc. Give straws to the students to blow these objects. Objects such as cotton and leaves will fly off the table as they are light but objects such as books will remain on the table as they are heavy.

Individual Activity (10 min)

Let students draw a light and a heavy object of their own choice.

This unit is based on reinforcement of concepts taught earlier. The following concepts have been revised here to prepare students for the discovery ahead.

- Big and small
- Long and short
- Tall and short
- Light and heavy

Lesson 1

Objectives

By the end of this lesson, the students should be able to recognise the opposites like 'big and small', 'fat and thin', 'long and short', 'tall and short' and 'light and heavy'

This increases visual skills and logic.

Learning Curve

Students already have an idea of the opposites 'good' and 'bad'. A students is called a good boy/girl if he/she does not fight with anyone, eats food properly, gets up in the morning on time and does not shout. Although it is not right to call students 'bad', but a student who shouts or doesn't finish his/her food or wakes up late in the morning is said to have 'bad' habits.

More opposite words are introduced in the student's vocabulary list this year. This prepares them for 'big and small' numbers.

These sample pages test the understanding of the concept of 'opposite' in students through a colouring activity. The students colour the pictures on these pages according to the difference in the sizes of 'Big' and 'Small' , and 'Fat' and 'Thin'.

Learning Resource

Two tables, Flash cards with BIG, SMALL, FAT, THIN, TALL, SHORT, LIGHT, HEAVY written on them.

Learning Activity (20 min)

Place one flash card (SMALL) on one table and the opposite (BIG) on the other table. For example, the difference between 'small' and 'big' may be shown by displaying the following opposites:

1 big blue ball	1 small blue ball
1 big red bus	1 small red bus
1 big white bat	1 small white bat
1 big orange	1 small orange

Later, change these flash cards to FAT and THIN, TALL and SHORT, LIGHT, and HEAVY. Using objects such as dolls, toys or books, displayed on these tables, different pairs of opposites can be discussed.

The students work in pairs to pick up 'opposite' objects or draw 'opposites'. For example, if a student from a particular pair picks up a fat, pink doll, then his/her partner has to pick up a pink, thin doll or if a student from a pair draws a fat cat, then his/her partner has to draw a thin cat.

Textbook Practice Pages (20 min)

Pages 84, 85

Pages 86, 87, 88 should be done in a separate period.

Additional Work

The teacher should create other similar worksheets in which students identify the differences through colour. It would be better if the teacher precedes this work by a visit to the zoo or a garden, where they learn the meaning of these opposites without being aware of the 'learning process' By observation, they will also be able to understand some finer aspects like the word SHORT has two opposites, viz., LONG and TALL. 'Long' is used for objects such as ribbons and sticks whereas 'tall' is used for objects standing on the ground such as people, trees, buildings, and poles.

13 Position

Suggested Activities

Whole Class Activity (10 min)

Simon Says Game – This game can be played for all the words introduced in this unit for showing positions.

- For example, when introducing the words **'up and down'**, say: Simon says 'stand up' and then Simon says 'sit down'.
- Similarly, when introducing the words **'inside and outside'**, say: Simon says 'name something that you see inside the classroom' and then Simon says 'name something that you see outside the classroom'. Repeat the activity with all students.
- To introduce the words **'above and below'**, draw a picture of a tree on the board. Call one student at a time to draw as Simon says. For example Simon says: 'draw a bird above the tree' and then call another student and say: Simon says 'draw a kite below the tree.' Repeat the activity with different objects.
- When introducing the words **'before and after'**, take the students to the playground. With an exception of two students, let the rest of them stand in a line. Now, tell student A that: Simon says 'stand before Ahmed' (name any student), then tell student B that: Simon says 'stand after Ayesha' (name any student.) Give chance to all students.

Repeat the activity by either giving the same instruction twice or three times and then change so that students listen and follow your instructions carefully. This makes the activity more interesting.

Small Group Activity (5 min)

- Give different objects to the students and tell them to place a few 'up' on the table and some 'down' on the mat.
- Tell a few students to stand outside the classroom. Then ask how many students are 'outside' and how many are 'inside' the classroom.
- Instruct students that each group member has to tell the others 1 or 2 things that he/she sees 'above and below.'
- Instruct students that each group member has to point out to the others 1 or 2 things that he/she sees 'before or after another.'

Individual Activity (10 min)

- Provide pictures of a table, chair, cupboard, tree etc. and ask students to draw something which is **'up'** and something thing which is **'down'**. For example draw a cat sitting up on a chair and another down on the floor.
- Provide a sheet of paper to the students and tell them to draw a big loop in the centre. Next tell them to make thumb impressions using poster paint '**inside and outside**' the loop.
- Students can use crayons or colour pencils to draw pictures inside and outside the loop too.
- Provide a picture of a tree and let students draw birds '**above and below**' the tree.
- Provide different objects, pictures or cut-outs of shapes to the students and tell them to put one in the centre and the other '**before and after**' it.

Lesson 1

Objective

By the end of this lesson, the students should be able to identify the position of objects.

Learning Curve

The words before and after were introduced to students when they were learning to write missing numbers. The same concept can now be related to positions.

Learning Resources

Objects such as fruits, vegetables, toys, empty box

Learning Activity (20 min)

Refer to lesson plan of Starter on page 84 as this unit is an extension of concepts taught earlier.

Textbook Practice Pages (20 min)

Pages 89 – 93

14 Money

Suggested Activities

➢ Coins and Notes

Whole Class Activity (10 min)

- *Circle Time* – Bring a small jar filled with candies. Make money cards or photocopy real notes and provide one note to each student. Assign the role of a shopkeeper to one student, let other students come one by one, give money and buy a candy. Make it clear that to buy and sell goods, we need money.
- Collect different small objects and set-up a shop or grocery store in the play area. Attach a price tag on each item. For example, a pencil Rs 10, a toy car Rs 30, a poster paint bottle Rs 20 and so on. Have at least ten to fifteen items. Let students take turns to become shopkeeper and customers. Provide them the notes that you used in candy buying activity.

Distribute the money cards or photocopied notes to all the students. Tell them that in this activity we will buy and sell items according to their price. Make two to three students shopkeepers and others will be the customers. Tell the students to come to the shop in pairs, select an item they want to buy, look at the price tag and check if they have enough money. If yes, then **count the notes** and give them to the shopkeeper; if not, choose another item which they can afford to buy.

Individual Activity (10 min)

Making Paper Money– Provide a sheet of paper and a coin to each student and tell them to use flat side of a crayon to rub over the paper and make impression of the coin.

Lesson 1

Objective

By the end of this lesson, the students should be able to able to recognise coins and notes.

Learning Curve

Students may be familiar with notes and coins, especially if they have gone out shopping with their parents. They must have received money as *'Eidi'* from their grandparents, parents, and other relatives on different occasions. Therefore, they will enjoy learning the use of money.

Learning Resources

Coins, Currency notes

Learning Activity (20 min)

Show real money to the students, (coins and paper notes) used in your country. Explain that when we want to buy something we should first find out the cost/ price of it, then check if we have the same amount of money with us, if yes only then will we be able to buy it.

Bring a small jar filled with candies. Make money cards or photocopy real notes and provide one note to each student. Assign the role of a shopkeeper to one student, let other students come one by one, give money and buy a candy. Make it clear that to buy and sell goods, we need money.

Textbook Practice Pages (20 min)

Pages 94, 95, 96

NEW

COUNTDOWN

PRIMER B

THIRD EDITION

TEACHING GUIDE



1 Numbers

Suggested Activities

➢ **Do You Remember?**

Numbers 1-30

Whole Class Activity (10 min)

Hide the ***number cards*** from 1-30 in different places in the classroom. Divide the class into two groups. Call one student from each group, then call out any number, e.g. 12, and tell them to find this number card in the classroom. Whichever student finds the ***number card*** his/her group will keep it. Keep calling students one by one and different numbers until all 30 numbers are found. The group that collects more cards will be the winner.

Addition: *Circle Time* – Distribute 10 ***counters*** to each pair. Write addition sums on the board, tell the students to add these numbers using the ***counters.*** They must first count and put the same number of ***counters*** separately, on their table. Then add by combining ***counters.*** Reinforce the concept of zero, by adding numbers with zero.

Subtraction: *Circle Time* – Make two big cardboard dice to play the dice game. Let a student throw one dice and another throw the second dice. Ask them to call out the number of dots he/she sees on top of the dice. Then, ask the whole class to take away the smaller number from the bigger number. Continue the game by calling out a pair of students.

Small Group Activity (10 min)

Numbers 1- 30: *Heart Puzzle*: Take a red card sheet and cut out the required number of hearts of approximately 6″× 6″. Write a numeral on one side of the heart and draw the corresponding number of hearts on the other side. Then cut each heart in half using a zigzag line. Mix these parts and let the students find matching parts of the broken hearts.

Addition: Refer to page 116 to 119 of Primer A. Let students practice addition of numbers including zero using ice cream sticks.

Subtraction: Refer to page 120 to 123 of Primer A. Let students practice subtraction of numbers including zero using ice cream sticks and ***counters***.

Individual Activity (10 min)

Provide a ***laminated template*** to write numbers from 1 to 30. You can also provide number cards to arrange numbers from 1 to 30 in sequence.

Addition: Provide a ***laminated template,*** ice cream sticks without or with subtraction sums written on them and a few ***counters*** to add numbers. Students enjoy making their own sums.

Subtraction: Give a small paper chits to the students along with 4 to 5 ice cream sticks with subtraction sums written on them and a few ***counters***. Ask students to copy down the sums on paper and solve using the ***counters***.

Textbook Practice Pages

Pages 2 to 7

These pages are to be used for revising the concepts, before introducing new ones. In order to assess and improve learning, further practice (oral and written) of concepts taught at early stages becomes essential. Young children require continuous reinforcement, so that they are able to link their previous knowledge with the new information, and to ensure clarity of mathematical concepts introduced at this stage.

➢ Numbers 31 – 50

Whole Class Activity (10 min)

Make a ***washing line*** in the classroom and prepare ***number cards*** from 31 to 50. Start the activity by asking the students which number comes first, then peg number 31 on the ***washing line*** in front of them. Then, ask which number will come after 31. After their reply, peg number 32 on the ***washing line***. Repeat the activity by letting students peg all numbers in sequence from 31 to 40 on the ***washing line***.

The same activity can be repeated for numbers 41 to 50.

Take the students to the play area. Distribute large ***number cards*** from 31 to 40 (and later 41 to 50) among the students. Tell them to arrange these number cards in a sequence from 31 to 40 (and later 41 to 50). Once the students have arranged the cards, give instructions that you will call out the name of a student and a number randomly. The child whose name has been called will go and stand next to the required number.

Small Group Activity (10 min)

Let students take turns and practice sequencing the numbers from 31 to 40 (and later 41 to 50) on the ***washing line***, using ***number cards***. Each group member will choose three cards and put them in the correct sequence on the ***washing line.*** The rest of the group will observe, and once the task is complete then the group will say if he/she has arranged correctly or not by ***'thumbs up'*** or ***'thumbs down'***.

Individual Activity (10 min)

Provide ***laminated templates*** to the students to practice writing numbers from 31 to 40 (and later 41 to 50), using board markers. You can also give them practice of sequencing the numbers using ***number cards*** independently.

Lesson 1: Numbers 31 – 40

Objective

By the end of the lesson, students should be able to recognise and write the numbers 31 to 40.

Learning Curve

Students have already learnt to count up to 30, they can learn to count upwards from 31 to 40.

Learning Resources

Building blocks, pencils, drinking straws, counters

Learning Activity (20 min)

Step 1. Count out 30 building blocks and stack them in columns of 10. The students should count along as well.

Step 2. Next, take a single block out of the container and place it next to the towers. Ask the students, 'how many blocks are there now?'

Step 3. Explain that one more than thirty is thirty-one.

Step 4. Trace the number 31 in the air by following the number written on page 9 of the book.

Step 5. In a similar manner, teach the numbers up to 40.

Textbook Practice Pages (20 min)

Pages 8, 9, 10

Wrap up Activity

Ask each student to build stacks of blocks of different numbers from 31 to 40. Assign each student a different number of blocks to build towers. For example, student A may be required to build stacks using 35 blocks while Student B may be asked to build stacks with 33 blocks.

Lesson 2: Numbers 41 – 50

Lesson 2 should be planned similarly. First revise numbers 31 – 40, then introduce numbers 41 to 50 but using a different resource to make it interesting.

Textbook Practice Pages (20 min)

Pages 11, 12, 13

➢ Missing Numbers

Whole Class Activity (5 min)

Prepare a number chart of numbers from 1 to 50 and display it in the classroom. Tell students to read the chart daily. When you intend to introduce the concept of missing numbers, cover up some numbers on the number chart e.g. 4, 7, 12, 18, 20, 26, 29, 33, 45, 49, 50 etc., a day earlier after the students have left the class. Next day, draw their attention towards the chart and ask them about the missing numbers while they read the chart. Remove the cover and let them check if they are right or not.

Small Group Activity (5 min)

Arrange any series of the ***number cards*** e.g.1 to 10/ 11 to 20/ 21 to 30/ 31 to 40/ 41 to 50 or 31 to 50 etc. (depending on the ability of your students) with some missing numbers, on the table. Put the missing numbers in a basket. Let the students find the missing number and place it in the correct position.

Individual Activity (5 min)

Write numbers (1 to 10, 11 to 20, 21 to 30, 31 to 40, 41 to 50) on ice cream sticks and give each child a set of incomplete number series, e.g. 1 to 10, missing out at least three to four numbers. Put all the missing numbers in a basket, now ask students to find the missing numbers of their series and place them in the correct order.

Textbook Practice Pages

Page 14

➢ Number Sequence

Whole Class Activity (10 min)

Circle Time – Make a number line on the classroom floor and prepare ***number cards.*** Mix up all the ***number cards*** and then arrange them in sequence, involving students through questioning e.g. which number comes after 32. Also ask them to find the flash card of the required number. The ***washing line*** can also be used for this purpose. Ask them to show you the sequence once they complete it.

Note: This activity can also be done in a small group.

Individual Activity (10 min)

Give ***number cards*** to the students and let them practice sequencing numbers on the floor. You can also provide them the ***laminated templates*** to complete the number sequence.

Textbook Practice Pages

Page 15

➢ Write in Tens and Ones

Whole Class Activity (10 min)

- *Circle Time* – Write numbers from 1 to 10 on the board and ask students what's special about the number 10. Point out that it has two digits. Use drinking straws or pencils to represent tens. Count ten pencils in front of the students and tie them with a rubber band. Tell students that this is 1 ten. Show them the ***number card*** of 10, telling them that this is also 1 ten. Now make one more set of ten pencils, keep both sets together and tell students that these are 2 tens. Show them the ***number card*** of 20 with it. Similarly, make bundles of 30, 40 and 50 and show them along with the ***number cards*** of 20, 30, and 40.
- *Circle Time* – Once the concept of tens is clear, introduce ones to them. Along with 1 ten (set of 10 pencils) pick up one pencil and keep it with the ten saying that this is 10 (pointing towards 10) and this is 1 (pointing towards single pencil). Now say that '10 and 1 make 11' Let students repeat after you. Introduce all numbers up to nineteen and then onwards in a similar way.

Small Group Activity (10 min)

Give ***number cards*** of different series e.g. 1 to 10, 11 to 20, 21 to 30, 31 to 40, 41 to 50. Let students display ***number cards*** in sequence and then make quantities using bundles of tens and ones (straws/ pencils) in front of those ***number cards***.

Individual Activity (10 min)

Give individual practice to the students for making tens and ones using straws/ pencils.

Textbook Practice Pages

Page 16

➢ Numbers in Words 1 – 20

Whole Class Activity (10 min)

Circle Time – Prepare ***number cards*** with numerals 1 to 20 and ***flash cards*** with spellings of introduced numbers written on them. Paste the ***flash cards*** in different places (walls/ boards) in the classroom. Show a ***number card*** to the students and ask, 'where can you see its matching spelling card?' Once they find the spelling flash card of the shown numeral, repeat the spelling twice or three times.

Seven **Two** **Nine**

Small Group Activity (10 min)

Provide ***number cards*** and spelling cards from 1 to 20, to the students. Ask them to place ***number cards*** in sequence and then place their spelling flash cards with them, making a pair.

Individual Activity (5 min)

Provide ***laminated templates*** to the students. Write the number spellings of at least five numbers at a time on the board, missing out a few letters from the spelling. For example O–E, –WO, THR– –. You can also give the flash cards of number spellings and numerals to the students for independent practice.

Textbook Practice Pages

Pages 17 to 24

➢ Count and Write

Whole Class Activity (10 min)

Counting Game – Divide the class into groups (depending on the number of the students). Give any 3 to 4 ***number cards*** (from 1 to 20) to each group along with few ***counters***. Ask them to take out the ***counters*** according to the given numbers and place them with the ***number cards***. The group that will count and keep all counters correctly will be the winner.

Small Group Activity (10 min)

Label disposable glasses with a number. Give these glasses and ***counters***/ beads to the students. Ask them to put in ***counters***/ beads in the glasses according to the number written on it.

Individual Activity (10 min)

Give individual practice to the students for keeping the correct quantity of ***counters*** in disposable glasses, used in small group activity.

Textbook Practice Pages

Pages 25 to 32

➢ Numbers Before, After, and Between

Whole Class Activity (10 min)

Pass the parcel Time – Write numbers from 0 to 50 (one number on each chit). Fold all 50 chits and put them in a basket. Let students sit in a circle. Tell them as you sing a song that they should pass the basket around the circle; and when you stop, the student holding the basket will pick up a chit, open it and let others know which number is written on the chit. Then ask the same student to tell which number comes before/ after his/her number.

	23	24
35	36	
41		43

Note: Same game can be played for 'between numbers'. Different chits are to be prepared for this activity. E.g. 2 ____ 4, 13 ____ 15, 46 ____ 48, etc.

Small Group Activity (10 min)

Prepare ***flash cards*** as shown as below. At the bottom of the card write three numbers out of which one is the correct answer.

Circle the number which comes before. __________, 23, 24, 25 **26 28 22**	Circle the number which comes after. 10, 11, 12,__________, **9 13 8**	Circle the number which comes between. 33, __________, 35 **36 32 34**

Individual Activity (5 min)

Give students individual practice with the flash cards that were used in the small group activity.

Textbook Practice Pages

Pages 33, 34

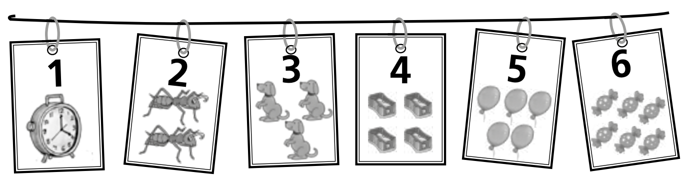
➢ Backward Counting

Whole Class Activity (5 min)

Circle Time – Take ten blocks and write numbers from 1 to 10 on them. Mix up those blocks and put them in a basket. Take the block of number 1 from the basket and put it on the table in front of the students. Ask them which number will come next and place the block of number 2 on top of number 1. Complete the tower up to 10. Let students read the numbers on the tower from 1 to 10 (bottom to top). Now ask them to read the numbers backwards. Also ask them to construct the tower backwards i.e. from 10 to 1.

Small Group Activity (5 min)

Let students arrange numbers backwards from 10 to 1 on the ***washing line***.
You can also provide them blocks to practice backward counting.

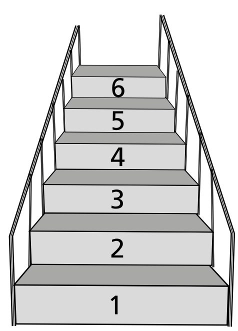


Individual Activity (5 min)

Let students practice independently making the tower by arranging number blocks backwards.

Textbook Practice Pages

Page 35



➢ Ascending and Descending Order

Whole Class Activity (10 min)

Place number cards from 1 to 10 on the stairs. Starting from the bottom put number 1 on the first step. Let students climb up the stairs one by one, while counting from 1 to 10 as they climb each step. Introduce the term ‘ascending order’. Tell them that numbers are increasing as you go up the stairs. Similarly, let them come down while counting 10 to 1. Introduce the term ‘descending order’. Tell them that numbers are decreasing as you come down the stairs.

Small Group Activity (5 min)

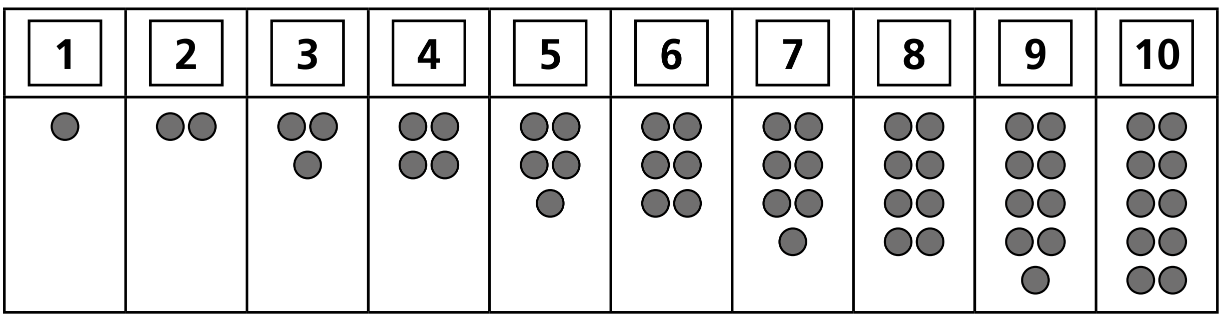
Let them arrange ***number cards*** on the ***washing line*** in ascending and descending order.

Individual Activity (5 min)

Provide two sets of blocks to the students with numbers 1 to 10 written on them. Ask them to build one tower in ascending order and one in descending order.

Textbook Practice Pages

Page 36



➢ Even and Odd Numbers

Whole Class Activity (10 min)

Take ***number cards*** from 1 to 10 and 55 ***counters***. Arrange ***number cards*** in front of the students horizontally. Now start placing ***counters*** below every ***number card***. Place 1 ***counter*** under the ***number card*** of 1 and say, it has no friend, it is alone. Then place 2 ***counters*** (in a pair) under the ***number card*** of 2 and say, they are friends. Then place 3 ***counters*** under the ***number card*** of 3 (2 in pairs and one single) and by pointing towards the single ***counter,*** say that this ***counter*** has no friend, this is alone. Repeat the same procedure till you place the ***counters*** up to 10 (refer to the picture). Tell them that those numbers that are in pairs are called **‘even numbers’** and the numbers that have one ***counte***r left, with no friend are called **‘odd numbers’**. Tell them that even numbers can be matched in pairs (or divided evenly into groups of two) while odd numbers cannot be matched in pairs (they cannot be divided evenly into groups of two).

Small Group Activity 10 min)

Draw a chart with two columns and label it **Odd or Even?** Write numbers 1 to10 in the left-hand column. Invite students to take turns rolling a pair of dice. Let him/her count the number of dots and say if the number is odd or even. Then ask other students to show 'thumbs up' or 'thumbs down' if they agree with his/her answer. Once students have discovered the right answer, write odd or even next to the number on the chart. Remind them that even numbers end in 0, 2, 4, 6, or 8 and odd numbers end in 1, 3, 5, 7 or 9. Continue until you have completed the chart.

Odd or Even?	
1	odd
2	even
3	odd
4	even
5	odd
6	even
7	odd
8	even
9	odd
10	even

Individual Activity (10 min)

Let students practice with ***number cards*** and ***counters***, as done in the whole class activity. Once they have placed all ***counters*** under the cards, ask them to write odd and even numbers on a piece of paper.

Lesson 3: Counting in 2s

Objective

By the end of the lesson, students should be able to differentiate between odd and even numbers.

Learning Curve

Students are familiar with like pairs such as 2 teaspoons, 2 bangles, or 2 ear-rings, and unlike pairs such as left and right, a spoon and fork, or a cup and saucer, which pair together to make a set.

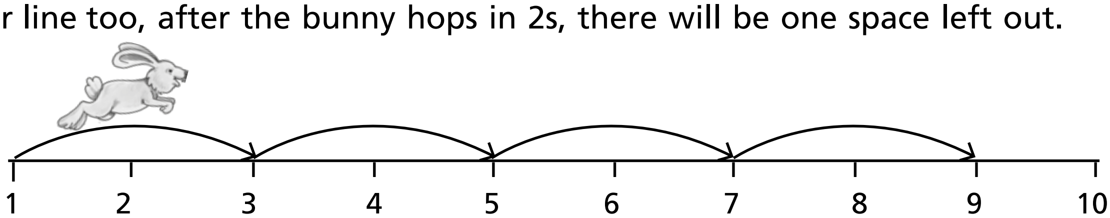
Learning Resources

- A table with like pairs such as 2 ear-rings on a card, 2 bangles put together with a rubber band, and so on.
- Another table with unlike pairs such as a toothbrush and paste, tied together with a rubber band, a badminton racket and a shuttle cock held together and so on.
- Net bags with odd and even number of beads in them.

Learning Activity (20 min)

Students stand in pairs (pairs of students are unlike pairs) and each of them hold up 2 objects, initially like pairs and then unlike pairs. The students then say out aloud that 4 makes 2 pairs, 6 makes 3 pairs, and so on. The teacher explains that since the numbers 2, 4, 6, 8, etc., can be associated with pairs, they are even numbers. These numbers are then shown on the number line.

In odd numbers, after making pairs, there will always be an 'odd' one left out. On the number line too, after the bunny hops in 2s, there will be one space left out.



Textbook Practice Pages (20 min)

Pages 37, 38, 39, 40

Additional Work

With the help of net bags or on the number line, students find that:

- when 2 even numbers are put together or added, the resulting number is even.
- when 2 odd numbers are put together or added, the resulting number is also even.

They mix numbers from odd and even bags and find these out for themselves.

➢ **Fractions**

Whole Class Activity (5 min)

Circle Time – Ask the students to form two groups with an equal number of students in each group. Tell them that the class has been divided in half. Then tell them to further divide their group with equal number of students in each group. Tell them that the class has now been divided into four equal groups.

Small Group Activity (2 min)

Give play dough to the students, ask them to make a ball and cut it into two equal parts. Then cut each half into two equal parts again to get four quarters.

Individual Activity (5 min)

Give a piece of paper to each child (square/ circle). Let them write 'whole' on that piece. Now ask them to fold that paper in half and write 'half' on each of the two parts. Next, tell them to further fold it and write 'quarter' on each of the four parts.

Lesson 1: Half and Quarter

Students are already familiar with the terms 'whole' and 'half'. Reinforce these concepts again before moving on to the new word 'quarter'.

Learning Activity (5 min)

Show different real objects such as apple, lemon, chapatti/bread, bun, melon, cake, etc. Tell the students this is a **'whole'**. Tell them that you are now going to cut them into two equal parts. Explain that when we divide something into two equal parts, then each part is called **'half'**. Explain that cutting something in two parts will not give you a half. Emphasise that each part has to be exactly of the same shape and size.

Once the concept of half is clear, show the halves again and tell students that you are going to cut them into equal parts again. Introduce the concept of quarter, saying that when something is cut into four equal parts then each part is called a **'quarter'**.

Textbook Practice Pages

Pages 41, 42, 43

2 Shapes

Suggested Activities

➢ Cube, Cuboid, Sphere, Cone, and Cylinder

Whole Class Activity (10 min)

Introduce 3D shapes with edges and vertices through geometrical solids. Pass the solid to each student and let him/her feel the solid, touching its edges and vertices first, with eyes open and then with closed eyes to identify the shape.

Small Group Activity (10 min)

Mystery Game – Prepare a ***feely bag*** and put all the introduced solids in it. Let students take turns to touch and feel any solid by putting their hands inside the ***feely bag*** and naming it, without seeing it. Let them take out the solid to check if they guessed it right or not.

Individual Activity (10 min)

Provide playdough to the students to make solids. Let them write the name of each solid that they have made on small chits and keep them with the solids.

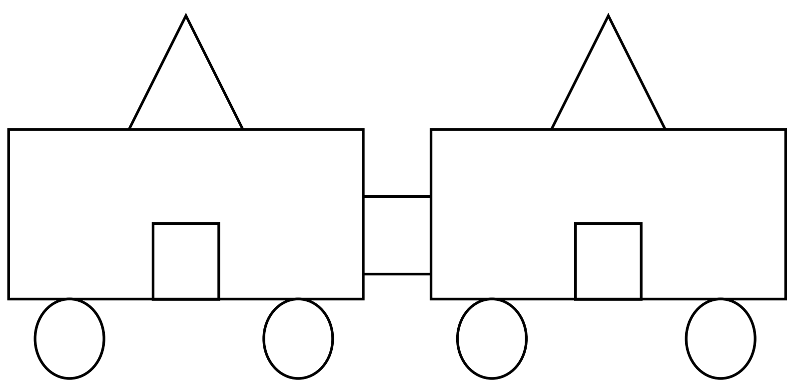
➢ Square, Rectangle, Triangle, Circle, Pentagon, Hexagon, and Octagon

Whole Class Activity (10 min)

Take students for a walk around the school and let them identify 2D shapes that they see. E.g. square window, rectangular door, triangular board, circle school bell, etc. Also let them find the shapes in the classroom too.

Small Group Activity (10 min)

Let students make different shapes (square, rectangle, triangle, pentagon, hexagon, octagon) using ice cream sticks. Also ask them to write the name of each shape on the ice cream sticks.



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Individual Activity (10 min)

Provide cut-outs of different shapes to the students and let them make different things out of those shapes e.g. boat, scenery, clown, rocket, house etc.

➢ **Linking Shapes**

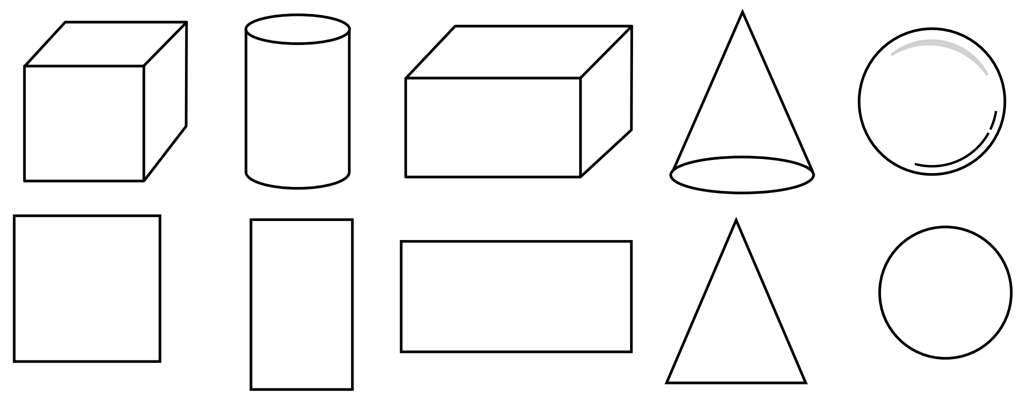
Whole Class Activity (10 min)

Circle Time – Prepare flash cards of flat shapes equal to the sides of the solids that you introduced. Display all flash cards to the students and keep the solids on top of the shapes on the flash cards. Let students observe which shapes match which solids.

Small Group Activity/ Individual Activity (10 min)

Let students practice matching flat shapes flash cards with solid shapes that were introduced in whole class activity, to further strengthen their understanding.

Provide ***laminated templates*** to the students to match flat shapes with solid shapes. Refer to the picture of the given worksheet to make the ***laminated template***.



Lesson 1: Shapes

The topic is an extension of 2D and 3D shapes already introduced in previous classes. Refer to lesson 1 on page 111 of Primer A.

Textbook Practice Pages (20 min)

Pages 44 to 51

Lesson 2: Shapes

Objective

By the end of the lesson, students will be able to recognise 3D shapes according to the number of faces.

Learning Curve

Students can identify and name solid shapes which they hold in their hands in everyday life. Now they will learn to identify these shapes according to the number of faces each shape has and the shape of the face. For example, each face of a cube will be a square, whereas a cuboid may have all rectangular faces or two square and four rectangular faces.

Learning Resources

Wooden blocks of solid shapes that are readily available such as balls, tins, dice, bricks, packet of biscuits, box, cartons, party hat, and funnel, objects shaped like a cylinder such as flask, glass and cones are of great use.

Feely bag (a strong cloth bag) is a good resource to use.

Learning Activity (20 min)

Call students one by one, tell them to close their eyes, give them a wooden block to hold in their hands and guess the shape merely by feeling. Then tell them to check how many faces it has. An interesting activity is to paint each face of a solid (say, a cuboid) in different colours, and stamp each face on an old sheet of newspaper. For example, the first 'stamp' is red. This stamping is repeated with different colours on each of the 6 faces. Students discover that a cube has 6 faces because they used 6 different colours.

Students can also draw different patterns on the surfaces for fun and work out the numbers of faces, and so on.

Similarly students work with balls, cans, and cones. They find that a ball has one round face. A can has two flat circular faces. The curved face can be flattened to form a rectangle. A cone has one circular face and one curved face, which can be flattened to look like a part of a circle.

Textbook Practice Pages (15 min)

Pages 52 to 55

Additional Work

The students may be asked to search in the playground for solid shapes studied in these pages. The work at this level is pre-primary and should aim to concentrate on improving students' spatial skills, recognition of various flat shapes and their association with the solid shapes to make a link between 2D and 3D shapes. Note: Various shapes are referred to as 'faces' (rather than surfaces).

Wrap up Activity (5 min)

Collect objects of the shapes introduced i.e. cube, sphere, cone, cuboid, cone and cylinder. Put these shapes in different places in the classroom. Keep at least 2 to 3 objects of one shape. Give a small bag/ basket to the students and ask them to collect any 2 or 3 shapes of their choice in their bag/ basket, then show it to the class and tell the name and number of faces each shape has.

3 Patterns

Suggested Activities

➢ Identification and Completion of Patterns

Whole Class Activity (5 min)

Circle Time — Collect different objects such as shells, pebbles, beads, counters etc. Make different patterns in front of the students. For example, two shells, three pebbles, one counter and then repeat the pattern. Involve students to help you complete the pattern.

Small Group Activity (10 min)

Provide different objects to the students e.g. shells, pebbles, beads, counters etc. Let them make their own patterns with these objects.

Individual Activity (10 min)

Provide lots of cut-outs of flat shapes (square, rectangle, triangle, circle, pentagon, hexagon and octagon) along with a sheet of paper. Let students create their own shape patterns by pasting the shapes on the sheet of paper.

Lesson 1: Patterns

Objective

By the end of this lesson, the students should be able to recognise and complete patterns.

Learning Curve

Students are already familiar with patterns, therefore now they can easily identify and make their own patterns.

Learning Activity (20 min)

Refer to lesson 1 and 2 of Starter on pages 47, 48 for planning this lesson.

Textbook Practice Pages (20 min)

Page 56, 57

4 Number Line

Suggested Activities

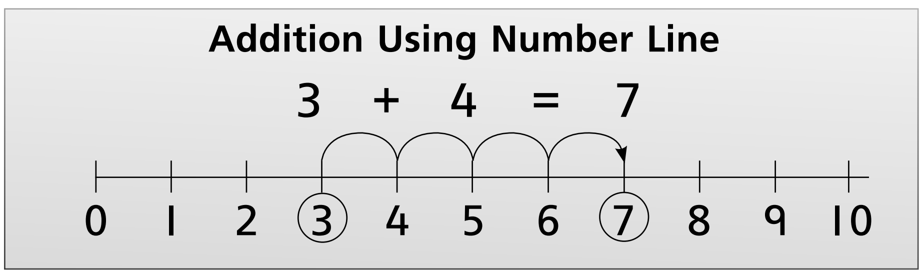
➢ Addition using Number Line

Whole Class Activity (10 min)

Prepare some ***laminated number lines*** on a sheet of paper. Also write some addition sums on ice cream sticks (refer to the picture). Pick up an ice cream stick e.g. 3 + 4.

Let students keep the board marker on the first number written on the ice cream stick i.e. 3. Now ask them to see the next number and move the marker forward according to it. Now move the marker four steps forward while counting till 4. Tell them that the last number i.e. 7 is your answer. Practice a lot of sums in circle time.





Small Group Activity/ Individual Activity (10 min)

Let students add numbers using ***laminated number lines*** and ice cream sticks in pairs. Let them check each other's work.

➢ Subtraction using Number Line

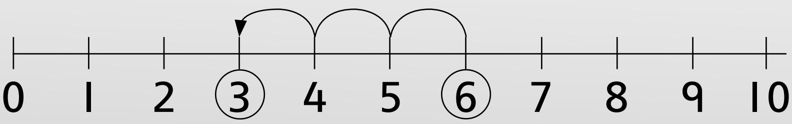
Whole Class Activity (10 min)

Use the same ***laminated number lines*** that were used for addition. Write some subtraction sums on ice cream sticks (refer to the picture). Pick up an ice cream stick e.g. 6 – 3. Let students keep the board marker on the first number written on the ice cream stick i.e. 6. Now ask them to see the next number and move the marker in a backward direction accordingly. Now move the marker two steps backward while counting to 3. Tell them that the last number i.e. '3' is the answer. Practice a lot of sums in circle time.

6 − 3 =

Subtraction Using Number Line

6 − 3 = 3



Small Group Activity/ Individual Activity (10 min)

Let students subtract numbers using ***laminated number lines*** and ice cream sticks in pairs. Let them check each other's work.

Lesson 1: Addition and Subtraction on a Number Line

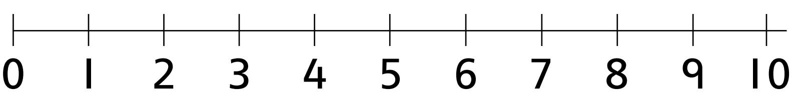
Objective

By the end of the lesson, students should be able to add and subtract numbers up to 10 on a number line.

Learning Curve

In Primer A, students have already learned to work practically with numbers up to 9 and have done addition and subtraction. Here they reinforce their knowledge of addition and subtraction, first by trying them out in a hopscotch pattern on the floor, then on a number line drawn on the floor and finally in their books.

A number line is a very helpful tool as students can differentiate between the bigger number and the smaller number at a glance by just looking at the position of a number on the line. Then they carry out additions and subtractions up to 10.



Learning Resources

- Little 'net' bags (properly sealed) containing 10 beads,
- Triangular flags
- Abacus
- Strings of beads, numbered 1 to 10, hanging from a rod

Note: Make sure that the material used is non-metallic, as metal may cause injury.

Learning Activity (20 min)

Students play hopscotch for fun. They then draw a number line from 0 to 10 on the floor (in the verandah or in the classroom) with the help of a teacher, making sure that all sections of the number line are equal.

If space permits, students can hop on the number line, like bunnies, to learn about more or less, add and subtract, and the beginning of the number sequence.

Activity 1

The teacher asks one of the students to go to the position 3 (on the number line) with 3 flags in his/her hand. Next, another student goes to 5 with 5 flags in his/her hand. Gradually all the positions are filled up. One student is made to stand on the position '0'. This one has no flags in his hand. The students exchange positions and simultaneously exchange the number of flags, according to their new position.

Activity 2

Give three flags to one of the students and ask him/her to go to position 3. Then give two more flags to this student and asks him/her to go 2 more spaces to the right on the number line. The student finds that he/she is on position 5. On counting the number of flags in his/her hand, he/she discovers that there are 5 flags. Now, write 3 + 2 = 5 on the board.

For **subtraction**, the student takes away, say, 3 flags from 7 and writes 7 – 3 = 4 on the blackboard. He/she works it out on the number line before writing the same in his/her book.

Textbook Practice Pages (20 min)

Pages 58, 59, 60

The pages in the book provide a lot of practice for recognition of numbers, carrying out addition and subtraction and filling out the answers in the boxes provided.

5-6 Addition and Subtraction

Suggested Activities

➢ Addition/ Subtraction of 1-digit Numbers

Whole Class Activity (10 min)

Prepare lots of ice cream sticks with addition/ subtraction sums written on them. Train students to add/ subtract one digit numbers mentally. Ask them to see the sum and keep the bigger number in mind. E.g. if the sum is 3 + 5, tell them to say, 'bigger number 5 in my head', then count 3 on their fingers (according to the other number.) Now ask them to count after the number which is in their head (5). Next tell them to close their three fingers one by one while counting and saying 6, 7, and 8. Say, 'the answer is 8'. Give a lot of practice of adding numbers mentally in circle time.

Similarly for subtraction ask them to keep the smaller number in mind. For example, if the sum is 4 - 2, tell them to say, 'smaller number 2 in my head', then count after the number which is in their head (2) to the required number, i.e.(4) on their fingers (according to the other number.) Say 'the answer is 2'. Give a lot of practice of subtracting numbers mentally in circle time.

Small Group Activity (10 min)

- Give addition/ subtraction sums written on ice cream sticks to the students and let them solve them first solve them mentally and then on a sheet of paper. Also provide sheets of papers so that they can copy down the sums and solve. Let them check each other's work.
- Provide a pair of dice and paper to the students. Let them roll the dice and make their own addition/ subtraction sums with the numbers that come on top of the dice, while writing the bigger number first and smaller number later. Ask them to make as many sums as they can.

Individual Activity (10 min)

Provide ***laminated sheets*** to the students to practice addition/ subtraction.

Lesson 1: Addition and Subtraction of Numbers up to 9

Objective

By the end of the lesson students will be able to add and subtract numbers up to 9.

Learning Curve

The students have learnt addition and subtraction of numbers up to 5. This is merely an extension of the earlier practical and written work.

Learning Activities (20 min)

All learning resources, activities and pages at this level are similar to addition and subtraction of numbers up to 5, except that larger numbers are used here. All the work in these pages stems from the earlier work using symbols + and –, and reinforces it. It is important for students to be able to mentally add and subtract numbers up to 9.

Textbook Practice Pages (20 min)

Addition: Pages 61 to 67

Subtraction: Pages 72 to 75

Additional Work

The teacher should create more worksheets showing number-group association, number recognition, and addition and subtraction work and distribute them among students so that they get a good amount of practice.

➢ Addition with Zero

Whole Class Activity (10 min)

Circle Time – Reinforce the concept of zero. Put two disposable glasses on a table and tell the students that we will add all numbers from 0 to 9 today. Put 1 ***counter*** in one glass and don't put any counter in the other. Tell the students that as we have to add a zero, and zero means nothing, therefore, we won't put any counter in the other glass. Keep on adding counters in the first glass up to 9, making the students realise that when a zero is added to a number, the answer does not change.

Small Group Activity (10 min)

Let students practice adding numbers with zero, as demonstrated in circle time.

Individual Activity (10 min)

Provide ***laminated templates*** to the students and let them do addition with zero using numbers 1 to 9 on it with board markers. Refer to page 67 for making the ***laminated templates***.

Lesson 2: Addition with Zero

Objective

By the end of the lesson, students should be able to do addition with zero.

Learning Curve

In Primer A, zero was introduced as the 'opposite' of 'all' i.e 2 + 0 = 2, 4 + 0 = 4, 5 + 0 = 5, and so on. This concept is there, forever. However, here, zero has been taught using another concept with illustrations. According to this concept, the notion of zero being 'nothing' is conveyed to students by telling them to look at page 68 and then asking questions like:

- 2 fish are in the bowl; how many fish are outside the bowl? Referring to the illustration, say that the answer is 0.
- All the 5 balls are on the table; how many balls are under the table? The answer is again 0.

On similar lines, the teacher can make more questions like: All 25 students have their lunch box in their bag; how many have it on the table?

Learning Resources

- Toffees and a plastic jar
- Several paper fish (with a clip attached at the back) and a fish tank
- A magnet on a fishing rod, to do 'fishing'
- Flags and a rubber band to tie them together in groups of 10

Learning Activity (20 min)

Refer to the above whole class activity to introduce addition with zero.

Textbook Practice Pages (20 min)

Page 68

Additional Work

Many more worksheets using the above concept need to be created and distributed among students for practice.

➢ Subtraction with Zero

Whole Class Activity (5 min)

Circle Time – Distribute different quantities of ***counters*** to each student e.g. 2, 5, 7, 1, etc. Ask them to come to you one by one and give you 1or 4 or 3 etc. ***counters***. After two to three students, ask a student to give you 0 ***counters***. Emphasise on the fact that 0 means nothing. Tell students that if they are asked to give zero ***counters***, they will not give any ***counter***. Keep repeating the same steps with all students. Increase the frequency of asking for 0 ***counters***.

Small Group Activity (10 min)

Prepare chits of subtraction sums (including sums carrying 0). Fold the chits and keep them in a basket. Let each child pick up a chit, solve the sum mentally and tell the answer to the group. Group members will tell if the student has given the correct answer or not.

Individual Activity (10 min)

Give a series of sums from 1 to 9 subtracting zero on either a ***laminated template***, chits or ice cream sticks for students to practice subtraction with 0.

Lesson 3: Subtraction with Zero

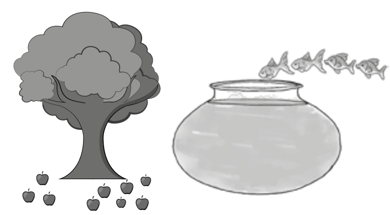
Objective

By the end of the lesson, students should be able to do subtraction with zero.

Learning Curve

In Primer A, zero was introduced as the 'opposite' of 'all' i.e 1 – 1 = 0, 2 – 2 = 0, 3 – 3 = 0 and so on. This concept is there, forever. However, here, zero has been taught using another concept with illustrations. According to this concept, the notion of zero being 'nothing' is conveyed to students by telling them to look at page 76 and then asking questions like:

- All the 9 apples are on the floor; how many apples are on the tree? Referring to the illustration, say that the answer is 0.
- All the 4 fish are outside the tank; how many fish are in the tank? The answer is again 0.



On similar lines, the teacher can make more questions like: All 30 students are in the garden, how many students are in the class?

Learning Resources

Refer to the resources used in the above lesson plan on addition with zero.

Learning Activity (20 min)

Refer to the above whole class activity to introduce subtraction with zero.

Textbook Practice Pages (20 min)

Addition: Page 76, 77

Additional Work

Many more worksheets using the above concept need to be created and distributed among students for practice, to reinforce the concept of zero, and to develop more writing habits.

➢ Making 10

Whole Class Activity (10 min)

Circle Time — Take 10 ***counters***, count them in front of the students and put them in a basket. Now tell them that we will make different combinations of 10. Beginning with the number 1, take 1 ***counter*** out of the basket and keep it on the mat. Take a sign of addition (made on a card sheet) and keep with that 1 counter. Count the remaining counters i.e. 9 and put them on the other side of the addition sign. Write this combination on the board i.e. 1 + 9 = 10. Now, make the combination with 2 i.e. 2 + 8 = 10, 3 + 7 = 10, and so on, in the similar way, including 0. Each time you make a combination with the ***counters***, record the combination in numerals on the board.

Similarly, tell students that we will subtract different numbers from 10. Beginning with the number 1, take out 1 counter out of those 10 counters and keep it on the mat. Count the remaining counters. Repeat the same procedure for subtracting all other numbers to 10, involving students. Each time you subtract a number from 10, write the equation on the board.

Small Group Activity/ Individual Activity (10 min)

Let students make 10 with different combinations using the ***counters*** and record those combinations on a piece of paper in numerals.

Lesson 4: Number Families of 10

Objective

By the end of the lesson, students should be able to recognise the number families of 10, such as:

3 + 7 = 10, 7 + 3 = 10, 10 – 3 = 7, 10 – 7 = 3.

Learning Curve

Addition and subtraction (and multiplication and division) with 10s forms the basis for the decimal number system. As students are constantly using their fingers to count up to 10, they can be easily made aware of such group formations.

The students should learn various number families by heart. This will prove useful for mental addition and subtraction in their later lives.

Learning Resources

- Strings and beads
- Triangular flags
- Flags numbered from 1 to 10. They can also be used when making bundles of 10.

Learning Activity (20 min)

Stringing together different numbers of beads to make groups of ten is a very useful exercise. Similarly, triangular flags can be used to make groups of ten, with 2 or 3 students holding the flags high, for the rest of the class to see. Repeat activities involving net bags, number beads and the number line but this time keep them focused on the number 10.

Using ***counters*** students practice addition with numbers 1 to 9 to make 10. The following poem can be of great help in reinforcing the concept of 10.

"1 is one, And all alone,

But zero is the hero! Place 0 after 1,

You get not 1,

But, Oh! My! My!

10 becomes the Hero!"

Textbook Practice Pages (20 min)

Page 69, 70, 71

Additional Work

The pages given in the book reinforce the work done practically. A great deal of oral and written work needs to be done to make sure that students can orally work out pairs of numbers which add up to 10 and then reposition the numbers to show subtraction. It is great fun to tie different bundles of 10 made of flags, beads (in strings) or ice cream sticks. These can be regrouped in further bundles of 10 (without emphasising the concept of **hundred**) in preparation for Class I.

To help students memorise number names and start with simple reverse counting, a little poem like this is fun:

1: **one**; **Zero** is fun!

2: **two** cows say mooooooo!

3: **three** donkeys say hee hee

4: **four** nails on the door

5: **five** fish alive!

6: **six** dogs have ticks

7: **seven** Angels from Heaven

8: **eight** eggs in a plate

9: **nine** grapes on a vine

10: **ten** chicks and a hen

7 Measurements

Suggested Activities

➢ Length

Whole Class Activity (10 min)

Take students outside into the school play area. Mark two points 'A' and 'B' at least 6 to 8 metres apart on the floor, and join them by drawing a straight line with a chalk. Let students measure the length of the line with their feet. They can measure any straight line either on the floor design or even the border of a flower bed by walking along it.

Small Group Activity (10 min)

Provide each group with a pencil and a blank card sheet. Tell them to measure the length of a table, window, or the board using the pencil and write the lengths as shown on the card. Later let all students sit in a circle and share the lengths that they have measured.

The table is ____ pencils long.	The board is ____ pencils long.

Individual Activity (5 min)

Let each student measure his/her arm using his/her hand span and write it on the given piece of paper. Ask them to share the length of their arms with their peers in circle time.

My arm is ____ hand span long.

➢ Weight

Whole Class Activity (10 min)

Circle Time — Ask a student to pick up a pencil, then ask another student to pick up a ***counter***. Later ask a student to lift up the cupboard. Make students realise that the cupboard is too heavy, we cannot lift it up, because it is heavy due to its weight. Later take them for a walk around the school, to observe heavy objects like benches, tables, school gate (iron), etc. Tell students that these things have a lot of weight, they are heavy.

Small Group Activity (10 min)

Bring a weighing scale in the classroom. Let the students weigh different heavy and light objects and record their findings as shown on the given chart.

Individual Activity (5 min)

Provide ***laminated templates*** with pictures of different heavy and light objects. Tell the students to encircle the heavy objects and put a tick on the light objects with board markers.

➢ **Capacity**

Whole Class Activity (2 min)

Send a note in the students' diaries to bring a pack of juice or flavoured milk. Provide plastic containers to the students and let them observe how much the container has been filled. Also encourage them to see the quantity in their peers' glasses.

Small Group Activity (10 min)

Provide different sizes of disposable glasses/ cups to the students. Let them pour water from one glass/ cup to another to see how much each container holds. Which container holds more quantity of water and which container holds less?

Individual Activity (5 min)

Provide ***laminated templates*** to the students. Tell the students to encircle the heavy objects and put a tick on the light objects with board markers.

Provide ***laminated templates*** to the students with pictures of different objects with different capacity. Tell the students to judge the capacity of these objects and separate them by writing (more) or (less).

Lesson 1: Length

Objective

By the end of the lesson, students should be able to measure lengths, compare, and decide which is long and which is short.

Learning Curve

Students are familiar with words 'long and short'. They have already learnt to identify long and short objects just by observation. Now, they will learn to measure lengths with strings or rope.

Learning Resources

Objects of different lengths, strings or rope, paper strips, measuring tape

Learning Activity (20 min)

Take students outside into the school play area. Draw a few lines of different lengths on the floor with chalk. Let students measure the length of each line with their feet or a piece of rope. They can also measure using their hand span. Once they are back in class ask them to share their findings.

Textbook Practice Pages (20 min)

Pages 78 – 83

Note: Similarly, plan lessons for weight and capacity.

8 Time

Suggested Activities

➢ **Reading Time**

Whole Class Activity (10 min)

Circle Time — Show a wall clock to the students and reinforce that the numbers 1 to 12 on the clock show the hourly time and that the longer hand represents 'minutes' and the smaller hand represents 'hours'. Also reinforce the concept of o'clock time. Later introduce 'half past' time by moving the position of the clock hands.

Small Group Activity/ Individual Activity (10 min)

Let students make clocks with a paper plate. Write different times e.g. 2 o'clock, half past 8 etc. on the board and tell them to show any of these times on their clocks. Encourage them to make as many clocks as they want showing different times on each clock.

Lesson 1: Time

Objective

By the end of this lesson, the students should be able to read and write 'half past' time.

Learning Curve

Students have already learnt to read and write o' clock time. Now they will learn to read and write 'half past' time.

Learning Resources

Clocks, pictures of clocks showing 'half past' time

Learning Activity (20 min)

Show two clocks to the students, one with 5 o'clock and the other showing half past 5. Ask them what do they notice? If they are able to identify that the position of the hour and minute hands is different than clap for them. If they are unable to give the correct answer, then ask questions which lead them to understand that:

- when the minute hand points at '12' then it is o'clock
- when the minute hand covers half the clock and points at '6' then we say, 'half past'

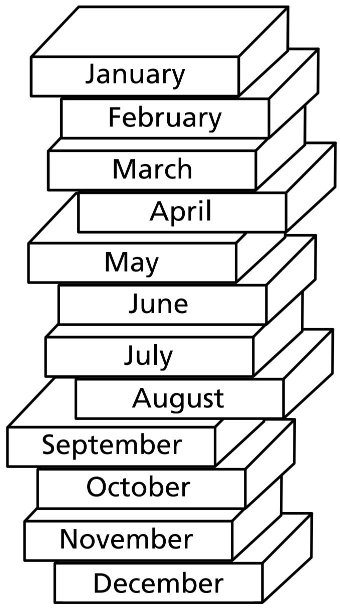
Textbook Practice Pages (20 min)

Pages 85, 88

➢ Calendar

Whole Class Activity (10 min)

Make a calendar on a full card sheet with days of the week written on it (refer to page 129 of Primer A for the picture.) Don't write the names of the months and dates, cover it with a plastic sheet and display it at some visible place in the classroom. Make small cut-outs using a card sheet and write the names of months and dates (1 to 31) separately. Talk about the date every morning and make it a routine to let students paste months on a monthly basis and dates on a daily basis.



Small Group Activity (10 min)

Chit Game — Prepare a chit basket containing different questions related to months and days.

Hand-over one basket to each group. Let each student pick up one chit, read it loudly for the group and answer the question written on it. He/she gets a 'thumbs up' if the answer is correct and a 'thumbs down' if the answer is incorrect. Each group member takes a turn until all questions have been answered.

Individual Activity (10 min)

Prepare flash cards of days of the week and months of the year. Let students practice sequencing days of the week and months of the year independently. You can also write the name of days/ months on blocks and let students sequence them or write each letter on a different block and let students join them to make the names of days/ months.

Textbook Practice Pages (20 min)

Pages 89, 90

9 Comparison

Suggested Activities

➢ Big and Small

Whole Class Activity (10 min)

Take students outside into the school play area. Let them observe different big and small objects in the surroundings. Once they return to class, let them share their findings.

Small Group Activity (10 min)

Divide students into 4 to 5 groups. Let each group collect 3 big and 3 small objects from the classroom and keep both big and small objects on the table separately. The group who collects all 6 items correctly will be the winner.

Individual Activity (10 min)

Let students draw a picture of any object. Provide them some old magazines, newspapers or picture cards. Let them look through the pictures, choose a picture of any object, cut it and paste it next to their drawing. Then compare both and write 'big' or 'small' in front of the pictures.

➢ Long and Short

Whole Class Activity (5 min)

Circle Time — Collect different stationery material e.g. pens, pencils, markers, etc. Place them on the table arranged according to their lengths. Involve the students in comparing the length of these items.

Small Group Activity/ Individual Activity (10 min)

- Provide the same material to the students used in circle time. Let them observe, compare and arrange the lengths.
- Provide coloured sheets of paper to the students. Let them cut different size strips - thin/ wide, long/ short, and paste them on another sheet of paper according to their lengths.

➢ Tall and Short

Whole Class Activity (10 min)

Take students outside into the school play area. Let them observe different tall and short objects in the surroundings. Once they return to class, let them share their findings.

Small Group Activity (10 min)

Divide the class into pairs and let each student measure the height of his/her peer, using yarn/ string. Later let them compare their heights and write the result (as shown) on a sticky and paste it on the board for all students to see.

Sharmeen is <u>tall.</u>	Ahmed is <u>short</u>.

Individual Activity (10 min)

Let each student measure the string of his/her height (used in the above activity) with his/her hand span and write it on a sticky and paste it on the board for all students to see.

➢ Light and Heavy

Whole Class Activity (10 min)

Circle Time – Take one transparent glass bowl and fill it up with water. Collect some heavy and light objects e.g. a nail, an eraser, a crayon, a piece of chalk, a piece of sponge, a feather etc. One by one, put these objects in the bowl filled with water and let students observe which of the objects sink and which of them float. Tell them that heavy objects sink in the water while light objects float.

Small Group Activity (10 min)

Blowing Activity — Place several objects in the middle of the table such as cotton, pins, leaves, paper, book, pencil etc. Give drinking straws to the students to blow these objects. Objects like cotton and leaves will fly off the table as they are light, but objects like books will remain on the table as they are heavy.

Individual Activity (10 min)

Let students draw a light and a heavy object of their own choice.

Lesson 1: Comparison

Objective

By the end of each lesson, the students should be able to compare lengths, weights, and heights. Students have already learnt about: 'big and small,' 'long and short,' 'tall and short,' 'light and heavy,' So, this unit is just an extension of the topic 'comparison' taught in previous classes, therefore, refer to the above activities and lesson on page 132 of Primer A. [Number of lessons planned depends on the ability of students to grasp these concepts.]

Textbook Practice Pages (20 min)

Pages 91, 92

10 Position

Suggested Activities

Whole Class Activity (10 min)

➢ **Above and Below**

Circle Time – Select a few students at a time and give instructions using words for the positions 'above or below'. For example, 'Put the ball below the table', 'Is the fan above you?', 'Put the card below the mat' etc.

➢ **Before and After**

Take students outside into the school play area. Divide them into two groups. Draw a number line on the floor. Call one student from each group and give instructions to stand before or after any number, e.g. stand before 2, stand after 5 etc. Call another pair of students and repeat the activity. The group that follows all instructions correctly will be the winner.

➢ **Behind and Front**

Take students outside into the school play area. Let them sit in a circle. Ask one of the students' to come out of the circle and stand in **front** of you. Tell the rest of the students to close their eyes, and that nobody will look **behind** their backs. Now give a handkerchief to the student in front of you and tell him/her to place the handkerchief **behind** the back of any student. After placing the handkerchief, the student will go inside the circle and sit in the centre. Now, tell the students to look **behind** their backs and check if the handkerchief is there. The student who finds the handkerchief will get up and say, the handkerchief was 'behind' my back. Now, this student will repeat the same procedure. Continue the game in the same way.

➢ **Over and Under**

Take students outside into the school play area and let them observe the things that they see 'over and under' the bench, trees etc.

➢ **Far and Near**

Take students outside into the school play area and let them observe the things that they see 'far and near' from where they are standing.

Small Group Activity (5 min)

- *Simon Says Game* — Play this game for all the words introduced in this unit for showing positions.

For example, when introducing the words 'above and below', give a counter to each student and say: Simon says 'put the counter below the chair.'

Repeat the activity by either giving the same instruction twice or three times and then changing so that students listen and follow your instructions carefully. This makes the activity more interesting.
Play this game for all the other position words introduced, that is: 'before and after', 'behind and front' and 'far and near'.

- Make a group leader and let students play the **'before and after'** game in the class. The group leader will give the instructions, e.g. hang number 4 after number 1 or hang number 7 before number 3 etc. on the ***washing line.*** The students will follow the instructions in turns. You can prepare chits as well with instructions written on them. Students pick up these chits one by one and place the ***number card*** on the ***washing line*** accordingly.
- *Position Game* — Put some objects on the table. Give chits to the students of the introduced position words. Ask a student to pick up a chit, read the position word and place two or three objects accordingly.

Individual Activity (10 min)

Let students draw and depict the following position words through their drawings:

- above and below
- before and after
- behind and front
- far and near

Lesson 1: Position

Objective

By the end of this lesson, the students should be able to identify different positions.

[Number of lessons planned depends on the ability of students to grasp these concepts.]
Students have already learnt about different positions such as 'up and down,' 'inside and outside,' 'above and below,' 'before and after,' Now they will learn about new positions: **'behind and front,' 'over and under,'** and **'far and near.'**

Since this unit is just an extension of the topic 'Position' taught in previous class, therefore, refer to the above activities and lesson on page 84 of Starter.

Textbook Practice Pages (20 min)

Pages 93, 94

11 Money

Lesson: Money

Objective

By the end of this lesson, the students should be able to use coins and notes in real-life situations.

Learning Curve

Students are familiar with notes and coins, especially if they have been shopping with their parents.

They must have received money as *'Eidi'* from their grandparents, parents, and other relatives on different occasions. Therefore, they will enjoy learning the use of money.

Since this unit is just an extension of the topic 'Money' taught in previous class, therefore, refer to the activities and lesson on pages 136 of Primer A.

Textbook Practice Pages (20 min)

Pages 95, 96